

Municipal Journal

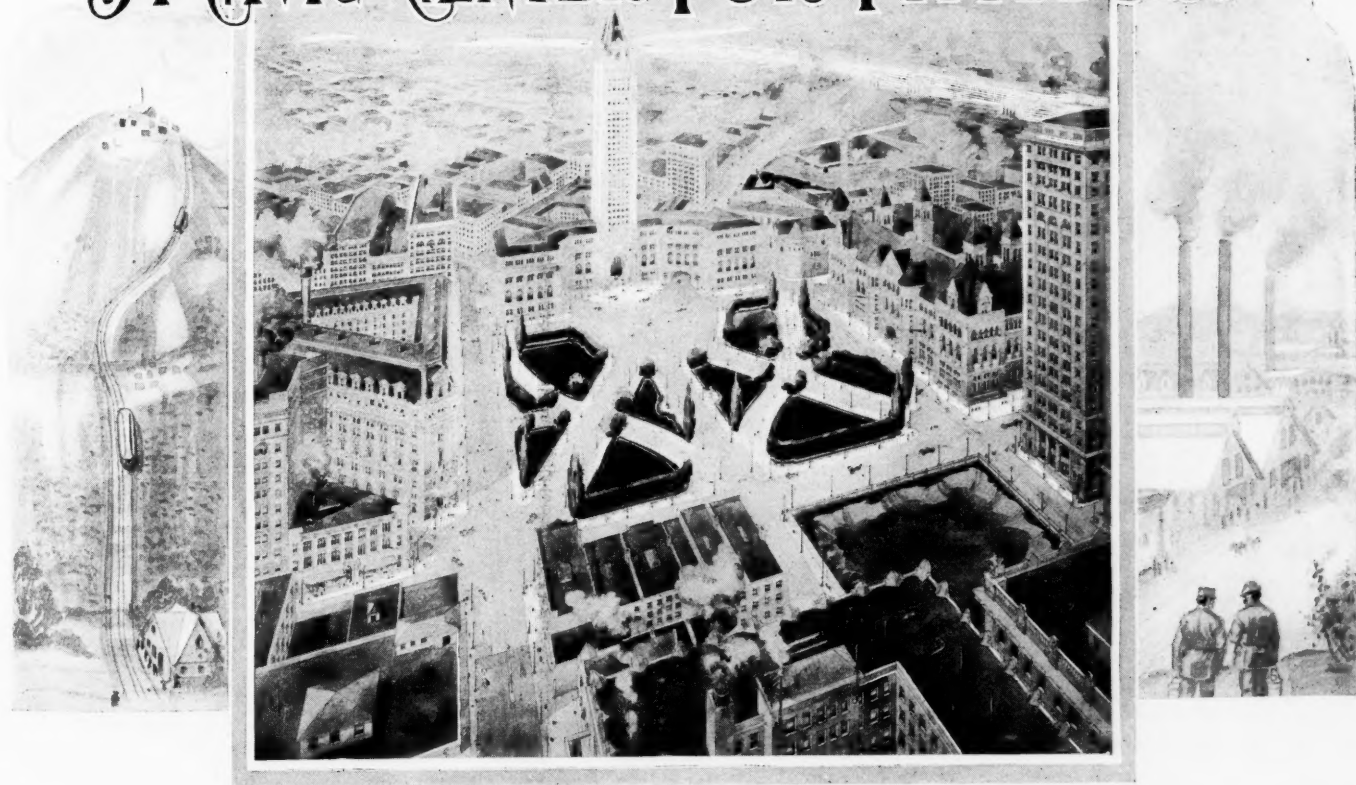
And Engineer

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A CIVIC CENTER FOR PITTSBURG



A PROMINENT feature of an Architectural Exhibition held in the galleries of the Carnegie Institute, Pittsburg, Pa., was a suggestion for the improvement of that city which was presented by the Pittsburg Chapter of the American Institute of Architects. The suggestions were in the form of several rendered drawings, indicating possible improvements, both in the downtown portion of the city adjacent to the Court House, and also in the Oakland district, comprising the surroundings of the great group of institutional and monumental buildings of the Carnegie Institute, Carnegie Technical School, new High School, and the new Soldiers' Memorial Building, and including the main entrance to Schenley Park from Grant Boulevard.

These drawings were shown in connection with a fine exhibit of municipal improvement schemes already

adopted and which are being carried out in various other cities throughout the country, including Burnham's San Francisco plans and sketches, the Washington and Cleveland layouts, plans for Manila and Rome, N. Y., and for a model village for the Pittsburg Reduction Company. In connection with this the Art Society of Pittsburg arranged to devote an entire reception to a presentation of the subject of municipal improvement of cities in this country, with Mr. Frederick Howe as the speaker, his talk to be illustrated by lantern slides both of the schemes of other cities and also of the possibilities for Pittsburg.

The suggestions which have been made for the improvement of the downtown section have been prompted by the necessity of

1. Providing sufficiently wide and through avenues for the transportation lines to the business district.
2. An arrangement of streets which will make possible the

transportation of the people between their homes and places of business with safety and dispatch.

3. The locating of public and semi-public buildings with regard to their logical relation to the community and to each other.

4. As a result of the above, the obtaining of a pleasing effect which always attends a combination of order and usefulness.

It is proposed to continue Sixth avenue straight through from Grant street to its intersection with Wylie avenue and Tunnel street; to continue Grant Boulevard straight through to Fifth avenue and Ross street, and to devote the intervening space between Grant street and Grant Boulevard extension, and Fifth avenue and Sixth avenue extension, to an open public square which will afford an

The widening and extension of Strawberry alley.

The widening and extension of Oliver avenue.

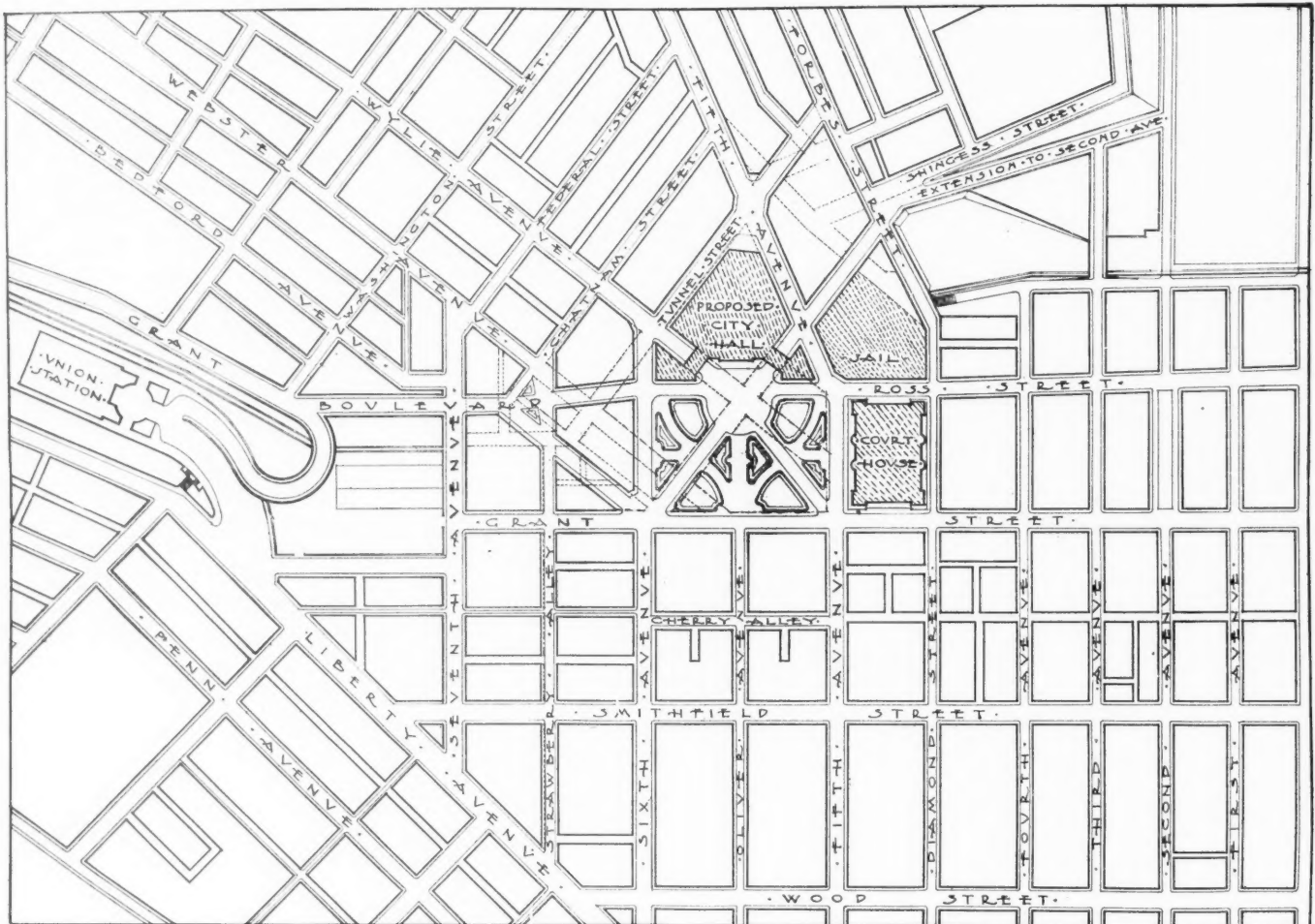
The widening of Cherry alley.

The additional extension of Grant Boulevard diagonally connecting with Sixth avenue at the corner of Grant street.

The extension of Federal street through to Webster avenue, which together with Seventh avenue will form one direct, continuous route to Fifth avenue.

The provision of a connection from Grant Boulevard by means of a bridge across the Pennsylvania railroad tracks down to Liberty street.

The extension of a street from the intersection of Forbes and Shingess streets through to Second avenue and the provision of a subway under Oliver avenue coming out at the intersection of Tunnel street and Fifth avenue.



PRESENT AND PROPOSED ARRANGEMENT OF STREETS ADJACENT TO THE COURT HOUSE

opportunity both for the location of future public buildings, including a new City Hall, and also provide a setting for Richardson's Court House, than which there is no better in the country and which is at present almost overpowered for lack of a proper setting.

Two suggestions are made for the treatment of this public square, one showing the City Hall located facing on Grant Boulevard extension and the other locating the City Hall on the new vacant Cathedral property facing Grant street. Owing to the fact that the function of the officers occupying the Court House and City Hall are correlated, the logical site of the City Hall is therefore adjacent to that of the Court House, and both suggestions are made with that in view.

In addition to the provision for a public square the following suggestions are also made:

The object of these changes is to provide additional and freer channels of circulation between the downtown section and the outlying districts of the East End, which would relieve the present congestion of the downtown streets and help to provide a practical solution of the street car problem.

The suggestions for the improvement of the Oakland district are for the purpose of securing an orderly and harmonious arrangement of the great institutional buildings, before mentioned, which have already and are to be erected in that locality, together with a proper treatment of the main entrance to Schenley Park.

The principal improvements suggested are as follows:

The widening of Bellefield avenue from Fifth avenue to Forbes street, and the widening of Forbes street from Dithridge street to Grant Boulevard, and the parking of the property to the east of

the Institute on Forbes street for the purpose of enhancing the setting of this important building and providing a dignified approach to the same.

The widening of Fifth avenue.

A new connection from Forbes street to Fifth avenue.

A slight change in the location of Fifth avenue between Bellefield avenue and Dithridge street.

The suggestion for the entrance to Schenley Park contemplates the filling of the ravine between Forbes street and the bridge and the forming of an open plaza with a direct connection from Grant Boulevard on one side and the road across the bridge into Schenley Park on the other.



PROPOSED IMPROVEMENTS IN THE OAKLAND DISTRICT

In the above the group of buildings at the upper left hand is the Carnegie Technical School. To the right is the Phipps Conservatory. In the centre is the Carnegie Library, to the right of which it is proposed to place a formal entrance to Schenley Park. Below to the left is a cathedral and to the right the Hotel Schenley, with the Soldiers' Memorial below it.

Sewer Stoppage by Tree Roots

THE City Engineer of an Ohio city of about 8,000 population is quoted as saying: "If those trees are not destroyed before long we will have no sewers in this city in working condition"; referring to the choking of pipe sewers and connections by the roots of Carolina poplar shade trees. Unless the trees are objectionable for other reasons, we hope that the engineer's ideas will not prevail. Sewers can be choked in this way only

when the joints are defective enough to allow the first entrance of a small root; and if the system and its connections have been so poorly laid that they are threatened throughout by such stoppages, the trees might be considered as doing good service in pointing out just where the defective joints are so that they may be repaired. Elms and other trees have given similar trouble in many cities, but they have rightly been considered of more value than the privilege of laying drains imperfectly or even of saving a few cents in their construction. Good construction under competent inspection will prevent such trouble in any new sewers. Defective joints in the old ones should be repaired. Or, in default of this, there are appliances for cutting off roots in sewers, and the cost of periodic inspection (which should be made anyhow) to determine their presence and of removing them would be much less than the value of the shade trees.

SEWERS, FLIES AND TYPHOID FEVER

Investigation by Merchants' Association of New York—Relations between Temperature, Flies and Intestinal Diseases

THE Committee on Pollution of the Waters of New York of the Merchants' Association has just made public the results of a series of investigations carried on during the past Summer under the direction of Dr. Daniel D. Jackson into certain features of the pollution of New York's water front by its own sewers. It was found that accumulations of sewage matter "of large extent constantly existed under the piers, in slips, in back-waters and wherever impediments to the free flow of the tide caused the formation of eddies. They were most extensive and constant in the immediate neighborhood of the sewer outlets."

It has, of course, been common knowledge for a long time that the common house fly frequently transported typhoid germs on its body and, in crawling over food, left them there, thus making it possible that those who subsequently ate the same should contract this disease. In endeavoring to discover whether such germs were probably carried by flies from New York's water front, Dr. Jackson had placed in all parts of the city, and especially along its borders, a large number of fly cages, which were collected each day and the flies therein counted and many of them examined for the number of fecal bacteria upon their bodies; one fly captured on South Street having been found with an estimated number of one hundred thousand of such bacteria on his mouth and legs.

The examinations of the water front by Dr. Jackson discovered several broken sewers and others which have outflows not only above low water mark, but in some cases much above high water mark, deposits from which along the shore in crevices and on the piles of the docks were found covered with flies.

The principal object of catching the flies was, not to examine them to determine to what extent they were filth carriers, since this fact is considered to be well established, but rather to determine where and during what season they were most numerous. In many parts of the city, especially at a distance from the water front, or at points where no fecal matter was exposed, very few flies were found, while near points discovered to be in an unsanitary condition they were most prevalent. The greatest number occurred in the weeks ending July 27th and August 3rd, and the time of appreciable prevalence was the three months of July, August and September.

Statistics and curved diagrams indicate that the prevalence of flies, high temperature and intestinal diseases all seem to increase and decrease simultaneously, and Dr. Jackson believes that the heat caused the increase in flies and the latter the increase in intestinal diseases. In fact the curves seem to correspond exactly, "even a secondary rise of flies in September is reflected in the rise of deaths from intestinal diseases." To further illustrate the relation between temperature and intestinal diseases another diagram was presented, extending over five years and showing each year an almost precise correspondence between the temperature curve, that which indicates the activity of flies and the curve of the typhoid fever and other intestinal diseases.

Another condition pointing to the same conclusion is that the cases of typhoid fever were practically all within a few blocks of the water front and were thickest near the points found by the inspection to be unsanitary.

This investigation and the report of Dr. Jackson should help to attract attention to the danger existing in unsanitary conditions, which permit flies to become the carriers of disease germs. It certainly offers additional evidence of the connection between the presence of filth and the so-called filth diseases.

Street Work in Hartford

AMONG the street work in Hartford, Conn., which has occupied the attention of the Engineering Department during the season just past, is the Albany Avenue improvement, which includes the rebuilding in a new location of one-half mile of highway 75 feet wide, the erection of a steel highway bridge on masonry abutments crossing the line of the Central New England Railway, the construction of an ornamental masonry arch bridge over Wood's River, and a single track trolley line throughout. This work was started in the summer of 1905 and has just been completed.

New streets to the number of fifteen, and aggregating four miles in length, have been laid out by the Court of Common Council during the past season, most of them residential. Under the allotment of city funds for improved highways, the city has constructed one mile of macadam road and the Street Commission has graded nearly one mile of streets, and placed new macadam upon fifteen others aggregating nearly three miles.

Most of the pavement in the city is sheet asphalt, which is giving very good satisfaction. Little of this

has been laid since 1903, but a contract has been made with the South New England Paving Company for the construction of seven thousand yards next year, the contract price being \$2.28 per yard, which does not include either foundation or cushion. Thirteen thousand dollars has been spent this year on the existing asphalt pavements. For paving between its tracks, the Street Railroad Company is now using wood blocks.

The paved streets are cleaned by machines at night and patrol by day. The city uses a rotary sweeper made by the Charles Le Vass Company and a steam suction cleaner made by the Furnace Suction Sweeper Company of Indianapolis, Ind. The latter carries about one and one-half yards per load. The cost for cleaning the paved streets is about eleven cents per square yard. The sweepings from these streets are sold for \$1.00 per cord. The steam rollers are housed in the repair house of the street department; and in this a pit, similar to that in a railroad round-house, is provided for inspecting the rollers. In this house are stored the bag and can carts also, and any repairs which these require are made here, as well as those which are necessary on the wagons and other property of the Street Department. For patrol cleaning the city has twelve pick-up-sweepers made by the Sanitary Sweeper Company.

Underground conduits contain practically all the wires within one-half mile of the City Hall, with the exception of those of the Street Railway Company: the various Public Service Corporations owning the wiring have complied with the order of the Board of Street Commissioners to place them under ground.

A systematic census of the street trees of the city was made by the Forester of the Park Department during the winter of 1906-7. Over 7,000 trees were examined and tabulated, 4,600 of which stand within the street lines. Since then the Court of Common Council has, by ordinance, created the office of City Forester and a systematic effort is being made to intelligently care for and preserve the city's shade trees.

Mosquito extermination has occupied the attention of the Engineering Department, which, under instruction from the Common Council, has taken up the study of the topographical condition of the meadows bordering on the Connecticut River with a view to filling and draining these to prevent their use as breeding places by mosquitoes.

The mileage of the local street railway has been considerably augmented during the year. Single track lines have been double tracked for about two miles, new single track has been placed to the extent of about 3,500 feet, and about a quarter of a mile of existing single track has been renewed.

Water meters are placed on all services throughout the city, the department owning the meters, which are of various makes. The consumption is about 60 gallons per capita. The rate is twelve cents per one hundred cubic feet for three thousand or less per day and six cents for anything over that amount. The city keeps the meters in repair and tests them on a Gow meter tester, made by the Mueller Manufacturing Company.

Sewage Pollution in the Delaware

THE New Jersey State Sewerage Commission, in its report for the year ending October 31, 1907, pays special attention to conditions in the Delaware Valley and to the work being done there to remove the danger to health consequent upon the discharge of sewage therein by most of the cities along its banks. Trenton, Belvidere, Phillipsburg, Palmyra, Riverton, Burlington, Delanco, Riverside, Beverly, Edgewater Park, Kinkora, Roebling and Gloucester, N. J., and Philadelphia, Chester, Bristol, Morrisville and Easton, Pa., all use Delaware River water for potable purposes. Also, we believe, all of them discharge their sewage into the same stream. The State of New York contributes a little pollution to the river, but it has agreed with New Jersey and Pennsylvania to do whatever it can towards protecting the head waters from pollution.

The State Board of Health of Pennsylvania, as well as that of New Jersey, is by no means insensible of the desirability of changing these conditions as rapidly as possible, and most, if not all, of the towns mentioned above have been warned by the boards that they must, within a reasonable length of time, make some provision for purifying their sewage before discharging it into the river.

Riverside has adopted plans for disposal, the carrying out of which is delayed by the condition of the money market. Washington, Belvidere and Blairstown are giving consideration to providing purification plants. Most of the towns have been given a time limit, and in several cases this has expired, and legal action is being taken to compel the cessation of the pollution of the Delaware, the Attorney General having been requested to proceed against Phillipsburg, N. J.

In Pennsylvania, Easton, the largest polluter of the Delaware, has been notified to purify its sewage by January 1, 1909, and will in February vote upon the adoption of plans already prepared to that end. Bristol is building a sewerage system and disposal works; Allentown is preparing plans for purifying its sewage; East Mauch Chunk has had plans made for a system and disposal plant, and several other cities have taken some action toward the preparation of similar plans.

It is stated that consideration by the board of individual pollution will be deferred until the larger and more important sources are removed, but that they will in due time receive proper attention. Without the elimination of these the other work might and probably would fail to accomplish the desired results. As an indication of the truth of this, sanitarians who are studying the recent outbreak of typhoid at Trenton and Roebling have stated that they believe this to be largely due to the heavy rainstorms which preceded the outbreak by some days, and which washed into the stream from its watershed surface filth carrying typhoid germs. Their reason for this belief is that the conditions relative to the discharge of sewage into the river did not seem to have changed immediately previous to the outbreak nor had the conditions

under which the public water supply was taken and delivered to the two places in question been altered in any way; and since it seemed almost certain that the drinking water was responsible for the outbreak, the effect of the heavy rains before referred to seemed to be the most reasonable explanation.

It remains to be seen to what extent the Boards of Health of these two States will enforce their orders and expressed determinations, in the face of the protests which have been received and which will undoubtedly multiply as they begin to exert legal pressure upon the various communities to spend hundreds of thousands of dollars upon their sewerage. So far each board has taken a stand which is, in most respects, all that could be asked by sanitarians. During the next two or three years those who wish to see these resolutions adhered to and these orders enforced should do all in their power to uphold the hands of the Boards of Health, for the boards and the officials are few who have the firmness to withstand the popular outcry which, we believe, will be raised when it is actually brought to the realization of all the communities mentioned above that they are ordered to spend the large sums which will be required for the carrying out of those orders.

Duplicate City Governments at Texarkana

THE city of Texarkana presents the somewhat unusual case of two cities, side by side, in different States, separated only by an imaginary line running down the main street, in this case State-Line avenue. A unit economically, the people are separated into two governmental divisions, about half of the 20,000 population now claimed for the city residing in Texarkana, Ark., the other half in Texarkana, Tex. There are two city governments, two Mayors, two Fire Departments, two sets of policemen, two complete and duplicated municipal governments. When a fire occurs in Texarkana, Ark., the department in Texarkana, Tex., may assist in subduing the flames, but upon Arkansas soil is under the orders of the Texarkana (Ark.) Fire Chief; the reverse is true when the force on the Arkansas side crosses to fight a fire on the Texas side.

One water company, however, serves both cities, in which respect a company, in this instance, has an advantage which a municipal government would not possess. If there were city ownership, there might be two systems of water mains, two standpipes and pumping stations. The Texarkana Water Corporation, incorporated in both States, pumps through its pipes water for which it charges the Arkansas consumer 40 cents per 1,000 gallons and the Texas consumer 50 cents per 1,000 gallons. The same water is furnished to both, but the franchises differ. The new franchise on the Arkansas side is for 50 years; that on the Texas side has 13 years yet to run, and the city may purchase any year upon one year's notice. All services are metered. The water is drawn from both pumped wells and flowing (artesian) wells; the pumped, or so-called "deep" wells, are simply wells

which are not artesian, but none of the wells is over 100 feet deep. One standpipe furnishes pressure for both cities. About 800,000 gallons a day are pumped, of which one-fourth, perhaps, is used commercially, the rest in houses and from ordinary faucets. There is no discount for cash. The sliding scale for the Arkansas side is as follows:

RATES

\$3.00 quarterly minimum. Rate per 1,000 gallons, 40 cents for which 7,500 gallons per quarter will be allowed.

\$4.50 quarterly minimum. Rate per 1,000 gallons, 35 cents for which 12,858 gallons per quarter will be allowed.

\$9.00 quarterly minimum. Rate per 1,000 gallons, 30 cents for which 30,000 gallons per quarter will be allowed.

\$15.00 quarterly minimum. Rate per 1,000 gallons, 25 cents for which 60,000 gallons per quarter will be allowed.

\$24.00 quarterly minimum. Rate per 1,000 gallons, 20 cents for which 120,000 gallons per quarter will be allowed.

\$45.00 quarterly minimum. Rate per 1,000 gallons, 15 cents for which 300,000 gallons per quarter will be allowed.

For the Texas side, 10 cents per 1,000 gallons should be added to the above schedule.

There are two gas companies, the Texarkana Gas and Electric Company, and the Federal Gas Company. The division is not by States, however. The former company furnishes by far the greater amount of gas and all the electric lighting, and also operates the street railway system. All school children ride at half fare. It charges \$1.50 per 1,000 cubic feet for its gas, which is water gas, with no discount for cash before the 10th of the month. It serves both cities, but has gas works on either side of the State line.

The city of Texarkana, Tex., recently adopted a new charter granted by the Legislature in April, 1907, reducing the number of councilmen and changing the form of government somewhat.

PAVING IN SCHENECTADY

EDITORIAL CORRESPONDENCE

POSSIBLY the most difficult conditions which have confronted the city of Schenectady, N. Y., in recent years in connection with street paving, were those found on Crane Street from South Centre Street to the N. Y. C. & H. R. R. R., especially on that portion from South Centre Street to Third Avenue. This work was described by City Engineer Sebring, in his Annual Report for 1906. It was completed this year and is reported to have proved satisfactory. The street at the point in question rises to a 7 per cent. grade and at the same time makes a considerable bend. The bottom was almost entirely quicksand, which in many places was extremely wet, and offered a poor support for a pavement. The method employed to meet this difficulty was to drive double plank sheet-piling bulkheads every twenty-five feet across the street in the shape of a flat V with the point up the hill, and in front of every third to place concrete to a thickness of about eighteen inches and to a depth of about five feet, with drain tile above each, connecting with the drains under the curb. The curb was laid on ten inches of concrete, under which was placed a four-inch drain tile, laid in crushed stone, under which, in the worst portion of the hill, was placed six

inches of concrete laid on plank, the whole being backed by one foot of concrete. The pavement was laid on ten inches of concrete, which in turn was laid on two layers of planking where the quicksand was especially soft. The sheet piling bulkheads were cut off at such a height that their tops extend into the concrete pavement foundation. This method of construction has, so far, been found very satisfactory.

Asphalt paving was laid upon this stretch, of which there was 14,638 square yards. The cost of this was \$1.27 per square yard; this including the concrete foundation. The contract for this paving was let in 1906, when bids as low as \$1.22 were received for sheet asphalt, this including a six-inch concrete foundation, but not the grading. During the past year, however, the price has risen to nearly its former level of about \$2.20 per square yard.

Cleaning the streets in Schenectady is performed during the summer time by both machine sweepers and the patrol system. According to the arrangement made with the Street Railroad Company, streets on which their tracks are laid are cleaned by them without any charge to the city. No details of cost of cleaning appear to be available or to have been kept by the Superintendent; the only figures reported being the total expenditures by the department for labor, teams, etc.

Sprinkling the streets is done in many cases by abutting property owners and in others by contract. The cost items of repairing asphalt, which constitutes a large part of the city's pavement, are kept in the same way as those of the street cleaning, and it cannot be determined what the cost of this is to the city. In fact, it does not seem possible to learn even the total amount spent on either of these branches of maintenance, since the same laborers may at different times be used on different classes of work without any note being made of the apportionment of their time.

Office Methods of Treasurer and Assessor

ONE or two of the methods employed by the Treasurer and Assessor of Utica, N. Y., are stated by them to be very satisfactory and to be worthy of trial by other cities. One of these is the sending out of duplicate bills of tax assessments, a carbon copy being made of the original, which permits the immediate detection of any change therein. This method saves the time required for making out a stub and prevents mistakes which sometimes occur in doing so.

Another feature is the method of describing property in the Assessor's office. There are several books of maps, each showing the lots, streets, sewers, etc. Each book is numbered, as are also the maps, blocks and lots; and every bill sent out is charged against the property by book, map, block and lot number. Opposite each map is a page on which is written the name of the owner of the property, the date of purchase and the former owner; and the changes in ownership are noted immediately upon the filing of the deed.

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DECEMBER 25, 1907.

CONTENTS

A Civic Center for Pittsburg (Illustrated).....	715
Sewer Stoppage by Tree Roots.....	717
Sewers, Flies and Typhoid Fever.....	717
Street Work in Hartford.....	718
Sewage Pollution in the Delaware.....	719
Duplicate City Governments at Texarkana.....	719
Paving in Schenectady.....	720
Office Methods of Treasurer and Assessor.....	720
Municipal Work for Unemployed.....	721
Flies and Typhoid Fever.....	721
Notes from Syracuse, N. Y.....	722
Kansas Soldiers and Preference Law.....	722
News of the Municipalities.....	723
Legal News—A Summary and Notes of Recent Decisions.....	728
Municipal Appliances (Illustrated).....	729
News of the Societies.....	730
Personals.....	730
Trade Notes.....	731
The Week's Contract News.....	732
Patent Claims.....	740
Incorporations.....	740

Municipal Work for Unemployed

AN excellent example at this time has been set by the city of Toronto, Canada, which has arranged to employ between three hundred and fifty and four hundred men in the construction of sewers which, under ordinary circumstances, would not have been begun until next spring, but will now be started at once in the west end of the city. While these sewers are needed and would have been constructed later, the starting of the work at this time was due to the large number of unemployed residents caused presumably by the shutting down of private work in that city. Following this example, Hamilton, Ontario, through the Associated Charities societies of the city, is considering making similar provisions for furnish-

ing labor to its unemployed. It is now generally recognized that the best of charity is that which furnishes labor with adequate pay, rather than the distributing of poor funds to those who make no return therefore. From a sociological point of view this action is therefore to be commended; but from a purely economical standpoint also it would seem advisable, even assuming, which is not necessarily the case, that work so done will cost more than it would under ordinary conditions. It seems highly probable that the additional cost will be much less than the sums which would otherwise be required by poorhouses, poor funds, hospitals and even jails, were an army of unemployed to remain in the city throughout the winter; to say nothing of taxes which would be remitted or uncollectable because of the poverty which is thus avoided.

If we are at the beginning of a period of financial depression and one during which capital will be timid about investments—which, as a matter of fact, we do not believe—we know of nothing which a city can do which will be more generally beneficial to itself and its citizens than the issuing of bonds (which are generally considered as one of the best classes of securities and which consequently should be saleable at advantageous rates even at such a time) and use of the returns therefrom in the carrying on of work upon various public utilities. A city can thus perform the double service of profiting by conditions in the market of both capital and labor, and of assisting by this action in restoring confidence and ameliorating the conditions in both.

Flies and Typhoid Fever

IN another column we give a brief abstract of a report concerning experiments conducted primarily to demonstrate that the discharge of sewage into streams may cause typhoid and other intestinal diseases, not only by the drinking of such water, but also through the agency of flies which transport germs from the stream to the dwellings of those in the neighborhood. These investigations were interesting and the results obtained were valuable, but the arguments do not seem to us adequate to prove the theorem.

The fact that both flies and typhoid cases increase and decrease with the temperature seems to be quite well established by the figures presented. This, however, does not necessarily imply any relation between those two, other than that of having a common cause. According to Dr. Jackson's statement, the sanitary conditions on and around the wharfs and water front could not be much worse in a civilized country, and these seem to us much more likely to be responsible for the fever cases than does the sewage in the river. Given these unsanitary conditions and the fact that flies are germ carriers, and the typhoid conditions are sufficiently accounted for without any reference whatever to the river or the sewers. Over almost the entire area which was found to be most seriously affected, convenience stations were entirely lacking and such private toilets as were found

were in a most filthy condition. Certainly the opportunity which such a state of affairs offers to flies for getting filth germs upon their bodies must be much greater than that contributed by the much diluted sewage at the outlets of the sewers or the slightly polluted waters of the river.

Aside from the agency of flies, it is quite possible that the polluted river water did something for spreading typhoid infection because of its being bathed in daily throughout the summer by thousands, both in the public bath houses and also from the docks; and the fact that such bathing would be most general during the hottest weather, and would be indulged in most extensively by those residing near the water front, would seem to be as probable a connection between temperature and typhoid as would the prevalence of flies.

As an argument against discharging sewage into streams, therefore, this report does not seem to be convincing. But as a most powerful one against filthy and unsanitary conditions it would seem worthy of the widest publicity. Ordinarily flies do not travel to any great distance, but heat stimulates them to extra exertion, when they travel for considerable distances and subject residents within the flying range of any filth center to great danger therefrom. This offers another argument for the attention by the well to do to the conditions under which "the other half" lives, and offers the most cogent reasons for the abolition of slums and the insistence upon universal cleanliness in all quarters of a city.

Notes from Syracuse, N. Y.

SYRACUSE, N. Y., has few macadamized streets, but City Engineer Allen is trying to have macadam placed on some of the lightly-traveled streets. A test of Tarvia was made on a cinder walk around one of the reservoirs, which had occasioned considerable dust, and the material was found highly satisfactory. Some interesting records are being kept by Mr. Allen with a view to ascertaining the cost of repairs, the repairing of each stretch of asphalt for each year of its life being tabulated. Estimating the cost of repairing at \$1.50 per square yard, which is about 15 cents more than is actually paid, he has found that the average cost of total repairs during the second five years of this paving is \$0.078, the cost increasing with each year of its life. The cost of asphalt paving recently has been \$2.20 square yard, exclusive of excavation.

Most of the street cleaning is done by a force of 150 "white wings." Each man has his beat and is held responsible for its condition. The sweepings are collected by wagons holding about three cubic yards each, which, together with the teams, are hired at \$4.00 a day.

During the past year all asphalt and brick streets have been flushed from three to six times a week by means of hose attached to fire hydrants. It is probable that a flushing machine will be purchased for performing this service next year.

Sprinkling of the streets is contracted for at the rate of \$1.39 per thousand lineal feet per week, the contractor furnishing his own sprinkler.

The above work, as well as the fire and police departments, are in charge of the Commissioner of Public Safety. An interesting feature of these departments is the use by the men of both of hand-ball courts, which have been placed in their buildings wherever possible, seven of the fire stations containing such courts. The men are continually practicing in them when off duty, which keeps them in fine physical condition and increases their efficiency for their duties. It is not possible to have competitions between the fire companies, but teams of policemen from the several stations meet in match games.

Kansas Soldiers' Preference Law

IN our issue of July 10th we published an article describing a law passed in Kansas last winter, under which soldiers were to be given preference for municipal positions in that State. This law has since then been passed upon by the Kansas Supreme Court, in a suit brought to remove from civil positions in Kansas City non-veterans who had been appointed in April of this year by Mayor Cornell. The Court in concluding states "(1) that a veteran who shows himself competent within the meaning of the law, to perform the duties pertaining to the office applied for is entitled thereto; (2) that it is the duty of the appointing power to determine whether or not the applicant possesses the qualifications which make him competent; and (3) that the examination of such questions shall be conducted fairly, impartially, and in good faith, and when so conducted, it is not subject to review."

We have received a letter calling our attention to this, which we give below. We see no reason for changing our opinion, previously expressed, that it is unfortunate that any city officials should have forced upon them conditions whose tendency must be to lower rather than raise the standard of efficiency of municipal employees. In most cities this is kept lower than it might otherwise be by the influence of friendship and political considerations upon the officials or others in power, and affecting conditions other than the ability of the applicant to serve the public well should, we think, be reduced rather than increased in number.

Editor MUNICIPAL JOURNAL,

Flatiron Building, New York, N. Y.

Dear Sir:—In your issue of July 10, 1907, page 53, you have published an article by Sheffield Cowdrick as to soldiers' preference law of Kansas. I enclose full decision as to the law as rendered by the Kansas Supreme Court, which declares the law constitutional and in force, from which you can glean parts for your JOURNAL.

I will say that, as I have been in the City Engineer's office for four years, and served in the United States Navy and received honorable discharge after the close of the Rebellion, Kansas having put such law on her statutes, I commenced proceedings at headquarters (Supreme Court) for relief and to test the validity of the law, the result being the enclosed decision. Many of your readers being old soldiers will be glad to learn how Kansas treats her veterans. No comments by me on those appointed to the different offices by the Mayor and Council. We propose to follow the case to the end in our rights, giving the positions asked for by those who served in the Army or Navy.

Yours truly,

CHARLES L. MCCLUNG.

KANSAS CITY, KAN., December 16, 1907.

NEWS OF THE MUNICIPALITIES

Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

Roads and Pavements

BALTIMORE, MD.—Believing that it is inadvisable to continue longer the use of wooden block pavements on the steep streets about the Court House, Mayor Mahool is planning to have the pavement taken up and some material less slippery—very likely bitulithic—laid in its place. The city has been spending \$1,700 a year for scattering sand or cinders over this roadway in slippery weather and removing the debris afterwards. Each sanding costs \$21.50 and the removal of the dirt \$37.26. The process has been repeated about thirty times a year. Wooden blocks were first laid at the request of the judges of the Supreme Court, who wanted a noiseless pavement. This is a practical instance bearing out City Engineer Fendall's claim that the selection of the kind of pavement should lie with a central authority and should not be left to local ideas.

KNOXVILLE, TENN.—Lengthy detailed reports of the condition of paving laid in the thirteen paving districts of the city were submitted to Council recently by Civil Engineers S. L. McCalla and W. H. Burk, who have been engaged in an investigation. Differing in some details, both reports criticise chiefly the concrete base and curbing. The wearing surface of both bitulithic and asphalt paving is found generally acceptable, but the binder course, owing to deficiency in bitumen, is held subject to rejection in some places. The concrete is reported as poorly mixed and improperly proportioned in most of the districts. The quality of the brick on some streets is criticised as being too soft and the workmanship in laying defective.

ST. LOUIS, MO.—The use of ordinary wooden blocks as paving for downtown streets was condemned at a meeting of the Associated Teaming interests of St. Louis by representatives of the association, who had, with Street Commissioner Travilla, inspected the streets where such blocks had been laid. It was announced that the Street Commissioner had also reached the conclusion that such pavement was unsuited for heavy traffic.

LOCKPORT, N. Y.—The Board of Trade has unanimously decided to recommend that the Common Council amend the city charter so that in future the city will pay half the cost of all street improvements and that owners of property on streets already improved be exempted from paying taxes on their property until it equals half the amount which has been paid by them for the improvement.

SCHENECTADY, N. Y.—The proposition to widen a crosstown street which has remained dormant some time was taken up at a meeting of the Chamber of Commerce. The committee to which the matter was referred reported in favor of widening Jay street in preference to Center or Clinton streets. The points of advantage in favor of Jay street were: Need of a street near State; greater depth of property, making it more suitable for erection of large commercial buildings; better situation for relieving street car congestion; better thoroughfare between the north and south ends of the city. A width of 75 feet is recommended, the expense to be divided between the city at large, the property owners and the railway company.

SYRACUSE, N. Y.—A change in the method of collecting assessments for sidewalks provided for cities of the second class will be requested of the legislature by the city administration. It is desired to put sidewalk repairs and construction in the same class as local improvements, such as paving, so that property owners may take advantage of the installment plan of payments.

UTICA, N. Y.—A report concerning the paving which has been done in Utica during the two years of Mayor Sherman's present administration is in the course of preparation for presentation to the Common Council. During the two years 45 streets have been paved, 19 resurfaced and the paving on many others repaired and put in a first-class condition. In doing this work there has been expended for paving the sum of \$305,272.

Sewerage and Sanitation

CHICAGO, ILL.—Opposition to the development of the Calumet Sag ship canal in preference to the Chicago river appeared at a meeting of the Chicago Real Estate Board. The report of the Sanitary District Committee of that organization presented some remarkable figures and facts to show that the Sanitary District Board was devoting its time, energies and money chiefly to the Calumet drainage and ship canal scheme and neglecting the interests of the main Chicago harbor and river. It was charged that since the present trustees came into office, they had expended in the two years' time on the dredging and improving of the Chicago river, not to exceed \$15,000, while, according to Col. Bixby, the Government Engineer, over \$800,000 was expended last year on the Calumet river. The report also alleged that money had not been secured from Congress in an amount anywhere near commensurate with the needs and importance of the Chicago river and harbor largely because the Sanitary Trustees had not aided the efforts made to secure such appropriations, but had devoted their lobbying in Congress almost exclusively to the Calumet river plans. One of the principal objects of the Calumet projects was said to be the development of Indiana towns, such as Whiting, Hammond, Gary, Robey and East Chicago.

HARTFORD, CONN.—Regarding the drainage of South Meadows for the purpose of mosquito extermination, City Engineer Ford reports that he has made a complete topographical survey and map. The work was carried on with great thoroughness, the map showing one-foot contours over the entire area, the location of every water course, and the soundings of the depth of every pond. A month's office work will be required to complete the design and estimates of the cost. Work will be commenced in the spring.

NORFOLK, VA.—Every baker in the city has been warned by the Health Department not to deliver bread on the doorsteps of consumers unless suitable boxes are provided to receive it. In the past it has been customary to leave bread on doorsteps or in vestibules without proper protection.

RICHMOND, IND.—Violations of the recent statute forbidding the hanging of dressed rabbits and poultry in front of meat shops and groceries will be strictly enforced by City Health Officer Dr. Charles S. Bond. Last year rabbits were allowed to hang in front of various

stores until the dust from the streets was so thick that a person would have no difficulty in writing his name on them.

WASHINGTON, D. C.—The big trunk sewer across the Eastern branch of the Potomac, emptying into the main channel opposite Alexandria, Va., has been put in service. The plugs were removed from the mouth of the outlet pipes and the big pumps at the station were started up. The sewage is delivered in the river thirty-five feet below the surface and it causes the water of the river to swirl in great eddies for a hundred feet about the outlet. Small vessels getting in the current are thrown off their course.

Water Works

DAYTON, O.—The report of the Meter Department of the water works for the month of November, showed 15,142 meters now installed, 247 having been added during the month, while 114 were taken out. The amount of coal consumed at the water works pumping station during the months was 791,010 pounds, which pumped 22,581,431,082 gallons of water.

HARRISBURG, PA.—Owing to a rise in the height of the water in the Susquehanna river, raw water direct from the river recently flooded the new well being built at the pumping station as well as the old well. After seventeen hours' hard work a bulkhead was adjusted in the well. In the meantime orders were issued to consumers to boil all drinking water.

LOUISVILLE, KY.—Following the announcements of the adjustment of water rates by which \$40,000 annually will be added to the income of the water company, a second increase is to be made which will increase the revenues by \$100,000 more. The natural increase of receipts due to growth of population was \$20,000, so that the total increase over the previous year will be \$160,000. This, it is believed, will be sufficient to meet the water company's obligations, operate the new filter, and, at no distant future, pay dividends to the city.

MONESSEN, PA.—Work of dynamiters came to light when it was discovered that one of the tanks of the Monessen Water Company had been almost destroyed. The tank was 16 feet high and 32 feet in diameter, holding 100,000 gallons, and was used to supply McMahan borough. Every hoop was snapped off and the staves are all broken, involving \$500 damage.

PITTSBURG, PA.—An estimate of the value of the Monongahela Water Company was made by Andrew W. Mellon, who appeared before the Board of Appraisers who had been selected to fix the value of the company's property which the city wishes to acquire. The opinion is from the standpoint of the company and is to the effect that the plant of the company is worth \$1,750,000, and that the rights of way, good will and ordinances in possession of the company are worth \$2,000,000.

ROME, N. Y.—The following water rates for large water consumers were adopted to go into effect the first of January: Over 700,000 gallons, two cents per 1,000 gallons; 500,000 to 700,000 gallons, four cents per 1,000 gallons; 300,000 to 500,000 gallons, six cents per 1,000 gallons; 100,000 to 300,000 gallons, eight cents per 1,000 gallons; 50,000 to 100,000 gallons, ten cents per 1,000 gallons; 40,000 to 50,000 gallons, twelve cents per 1,000 gallons; 30,000 to 40,000 gallons, fourteen cents per 1,000 gallons; 20,000 to 30,000 gallons, sixteen cents per 1,000 gallons; 7,000 to 20,000 gallons, eighteen cents per 1,000 gallons; 1 to 7,000 gallons, twenty cents per 1,000 gallons. On many of the large consumers the rate will be double the flat rate now paid.

SALT LAKE CITY, UTAH.—The city, through L. C. Kelsey, City Engineer, and A. F. Doremus, Water Engineer, has filed with the State Engineer application to take the five small lakes at the head of Big Cottonwood canyon, known respectively as Lake Blanche, Lake Minnie, Twin Lakes and Silver Lake, for reservoir sites. The application was made upon the recommendation of Franklin S. Richards, counsel for the city in all water litigation. It is the intention of the city to make each of these lakes a huge reservoir for the supply of the city with water from October 1 to June 1 of each year. The lakes are fed by mountain streams and are in part the source of Big Cottonwood creek. With this reserve supply of water it is figured that even if the Progress company suit, now on trial, is decided against the city, it will be possible to obtain an even larger amount of water than is now claimed.

WARREN, PA.—Official notice has been served on the Warren Water Company that the borough will avail itself of a clause in the water franchise of 1903, by which it was agreed to make an appraisal of the value of the plant for the purpose of purchase by the city. The company on its part has offered to deliver its plant to the Borough for the sum of \$410,000, of which \$300,000 is to be paid in cash and the balance at the rate of \$22,000 in five yearly payments, on condition that no appraisal is made.

YOUNGSTOWN, O.—A careful estimate has been made by City Engineer F. M. Lillie of the capacity of the basin of the Berlin township reservoir in the upper Mahoning river valley. The estimate of 5,286,840,964 gallons confirms the approximate estimates previously made. The reservoir will extend back nine miles from the fifty-foot dam which it is proposed to build.

Street Lighting and Electric Power

BUFFALO, N. Y.—After several conferences with the representatives of the Welsbach Lighting Company, Mayor J. N. Adam has recommended that a contract be made with that company for lighting the entire city with Welsbach lamps. He figures that the city will get its light for \$19.83 as compared with the old price of \$24.75. The contract is for five years, the candlepower of the lamps 69, and the minimum number of lights 5,000. The price for mantles and care is 3 cents a lamp a night, or \$10.95 a year. The gas will cost 75 cents per 1,000 feet, or \$8.88 per lamp per year.

FORT SMITH, ARK.—After a controversy covering a period of almost two years, the city has made a contract with the electric light company for 250 lights a year at \$55 each for a period of ten years. This is an increase of 181 over the number now in use.

PORTLAND, ORE.—That Portland should own and operate its own municipal lighting system is the opinion of the Lighting Committee of the City Executive Board. Its report to Mayor Lane suggests that the power in Bull Run river, the source of the city's water supply, could be utilized as well as the heat from the proposed garbage crematory. The city now pays \$63.60 for 1,378 arc lights, which is said to be only about half of the number actually needed.

PITTSBURG, PA.—The consolidation of Allegheny and Pittsburg brings the question of municipal ownership of lighting plants to the front. Pittsburg is now paying \$76 per lamp per year, while the lights supplied by the Allegheny municipal plant are figured at \$65. An investigation will be made to find out whether a sufficient allowance is made for depreciation in the municipal plant and whether the efficiency of the service is the same.

Fire and Police

AUGUSTA, GA.—It is contended by the Chief of Police and City Recorder that the Police Department instead of costing the city anything is really a source of profit. The city appropriates \$61,000 for maintenance of the Department. The credit claims are: Value of work on street and fines collected, \$44,305; fines remitted and suspended by Mayor, \$10,107; fines suspended by Recorder, \$10,775; saved from annual appropriation, \$4,033. The labor account is figured on the basis of a value of \$1.40 for a day's work; the cost of maintenance of a prisoner is twenty-five cents.

RIO DE JANEIRO, BRAZIL.—One of the great electric works of Berlin, Germany, has given a private exhibition of an elaborate new police alarm installation it has just completed for the city of Rio de Janeiro. It represents the cost of \$500,000 and its special feature is a system of 580 patrol boxes to be scattered throughout the city, the keys to which may be purchased by trustworthy citizens, enabling any of them to turn in a police alarm just as alarms are now turned in by the public. In order to identify the person who turns in the police call, his numbered key cannot be extracted except by the authorities.

CHICAGO, ILL.—City Statistician Grosser declares that citizens of Chicago are better than citizens of Boston, for in Boston 83.7 persons out of each 1,000 were arrested in 1906, whereas the proportion in Chicago was only 44.8. In a similar manner it is shown that during the present year Boston has grown more wicked while Chicago has improved more than 50 per cent. Chicago has only 18.7 policemen to every square mile, whereas wicked Boston has 29.5, New York 27, and Baltimore 30.

BOSTON, MASS.—Exception is taken by City Statistician Edward Hartwell to the deductions of City Statistician Hugo Grosser, of Chicago, Ill., to the effect that Boston is a more wicked city than Chicago. Mr. Hartwell states that the low percentage of arrests in Chicago is due to the notorious inefficiency of the police. Two-thirds of the arrests in Boston are for drunkenness. If a man staggers from the straight line in Boston he is arrested. In Chicago, the police themselves visit saloons. Moreover, about 3,000 juveniles arrested figure in the statistics of arrests, although they are not considered as criminals. One thousand violations of speed ordinances by automobilists in Boston also swells the list. Boston, it is said, is a favorite sojourning place for fugitive criminals from the West on their way to Europe. After all, however, Mr. Hartwell admits that crime is increasing in Boston.

KALAMAZOO, MICH.—Because of the murder of H. S. Davis by a burglar, and the attempts to hold up people on the streets recently, the Police Commission has issued orders which means a general cleaning of conditions in Kalamazoo, the like of which the city has never known before. The crusade is to be carried particularly against the saloons harboring undesirable characters. All stalls, all tables, all wine rooms, all dice boxes, all card games, everything that favors loafing, is ordered out. Loafers who have lived in the city for years will be made to go to work or leave the city.

NEW YORK, N. Y.—Commissioner John H. O'Brien, of the Department of Water Supply, Gas and Electricity, has officially announced that the work of laying the high pressure water mains in the Borough of Manhattan has been practically completed. The service will not be put into operation until March, as exhaustive tests will have to be made first. As the pressure of water is 250 pounds at the hydrant, it is impossible for firemen to hold the hose and some new form of apparatus will have to be adopted. A stream of water can be thrown 300 feet in

the air by the new system. The Edison Company will supply power to operate the pumps under a penalty of \$500 for each minute's delay over three minutes after a fire alarm.

PHILADELPHIA, PA.—A fire which destroyed the residence of General Edward De V. Morrell developed some incidents worthy of comic opera. The Holmesburg volunteer fire brigade started for the fire, which was five miles away, in Torresdale. An automobile was used to tow the engine. Half way to the fire the automobile balked and the men hauled the engine the rest of the way. On arrival at the fire it was discovered that the hose nozzle had been left behind—it had been loaned for street sprinkling. Nothing daunted, men were dispatched for the nozzle. It could not be found, but another was borrowed. When this had been brought to the scene the mansion was in ashes.

PITTSBURG, PA.—Pittsburg policemen must not flirt, says an order issued by Superintendent Thomas A. McQuaide. Of late many patrolmen have asked to be transferred from the busy downtown streets to the hilltop suburbs, pleading that their health needed the purer air. Mr. McQuaide finds that policemen prefer the suburbs because they can kill time talking and flirting with young women. Several transfers have been made, and hereafter any policemen caught talking to women while on duty, except on business, will be summarily dismissed.

UTICA, N. Y.—General Manager Allen, of the Utica and Mohawk Valley trolley lines, has submitted to C. O. Jones, of New Hartford, Chairman of a special committee of representatives of neighboring municipalities, plans for a car for the purpose of transporting fire apparatus. The car is to be large enough to carry a fire engine and a hose cart and is to have two inclines for loading. A motor may be used to operate a windlass for drawing up the apparatus. Letters have been written to car builders for bids on a car to be constructed on the plan outlined.

Government and Finance

ALEXANDRIA, VA.—City Council has directed the Finance Committee to consider and report on the best method of refunding the outstanding city bonds, amounting to \$748,000. The immediate object is to give the delegate for the city in the General Assembly an opportunity to introduce a bill necessary for carrying out the plan in the next session of the Legislature.

BOSTON, MASS.—Mayor-elect George A. Hibbard wants a new charter for Boston and will file a petition with the next Legislature asking for action shortly after taking office, January 1.

HAVERHILL, MASS.—Mayor Roswell L. Wood, who has just been re-elected to office for the fifth term, believes that Haverhill is burdened with an antiquated city charter, and in his inaugural will ask to have his views indorsed by the people and incorporated in a petition to the Legislature. The change he advocates is that the Mayor shall serve on all committees, that the city government shall consist of a Mayor and a Board of seven or eleven Aldermen who shall receive salaries of \$500 a year, with no Common Council.

JEFFERSONVILLE, IND.—A movement is on foot with the commercial clubs of this city and New Albany to bring about concerted action between the two cities with a view to obtaining desired legislation. The commission form of government is advocated for cities like Jeffersonville and New Albany on the ground that the cost under the present law is twice what it should be. In Jeffersonville, for instance, the Clerk, with a salary of \$1,100, does not put in an hour's work a day on the average, and \$5,000 is spent on the executive department, which does

no work that could not be looked after by the City Engineer and Mayor.

LOUISVILLE, KY.—City Attorney A. E. Richards has requested the Tax Receiver to send to his office all unpaid tax bills for the past three years. Suits will be brought upon these bills at once and an extra effort will be made by the entire office force to reduce the number of back tax bills. Last year \$412,190 in back taxes were collected, and more suits were brought to a successful end than ever before. Previous to 1906 back taxes drew only 6 per cent. interest, but the Legislature altered the rate to 12 per cent. Additional penalties for back taxes are also being considered.

MOUNT VERNON, N. Y.—Frederick W. Clark recently applied for a receiver for the Mount Vernon Utilities Corporation, of which he is counsel, before Justice Keogh in the Supreme Court at White Plains. William D. Grant was appointed. The Mount Vernon Utilities Corporation was organized about a year ago through the efforts of Dr. Edward F. Brush, at that time the reform Mayor of the city. The public subscribed for stock freely in \$20 and \$30 lots, aggregating 1,033 shares. The corporation purchased a 70-acre farm, which had on it a 30-acre pond from which were cut 15,000 tons of ice. Ice-houses were erected and the supply was shipped to Mount Vernon as needed. The utilities corporation sold ice at 30 cents a 100-weight, from 10 to 20 cents cheaper than the American Ice Co. The utilities corporation had no trouble in selling its supply, but collections were bad. The company's liabilities are between \$4,000 and \$5,000, making a total loss of nearly \$3,000 on the first season. Former Mayor Brush says that he believes that if arrangements could be made to put the corporation on a sound financial footing, resumption of business another season would be attended by success.

NEWARK, N. J.—In the course of a conference among city officials regarding the temporary scarcity of city funds due to the slowness with which taxes are being paid, the idea of establishing a capital fund by an issue of \$4,000,000 or thereabouts of permanent bonds was suggested by City Treasurer Bacheller. Other ideas for the accomplishment of the plan of doing away with the borrowing system were suggested, including the making of a double tax assessment in some one year, and a scheme of anticipating the time for paying taxes one month each year until taxes will eventually become payable in January instead of late in October, as now.

PORTSMOUTH, VA.—At a recent Council meeting the Committee on City Extension made a favorable report on annexation and defined the limits of the territory. An issue of bonds will be necessary to carry on improvements in the new territory for two years. At the same meeting the Charter Committee was directed to consider the advisability of providing a city government by commission. The work of this committee has hitherto been preparing a charter that would conform to changes in the State Constitution.

PROVIDENCE, R. I.—Alderman Parks has introduced a bill in the Board of Aldermen affecting all city departments that receive fees. These officials are to be required to report the amount of their receipts to the City Auditor.

ROCHESTER, N. Y.—All the ordinances required to be passed under the new charter have been adopted by the City Council. These include the park ordinances, Mount Hope Cemetery ordinances, those relating to licensing of billiard parlors and bowling alleys, employment agencies, sealer of weights and dog licenses, and the bonding of city officials. Besides these, an amendment to the Health Ordinance limiting the collection of gar-

bage to the Genessee Reduction Company, and a milk ordinance requiring milk to be delivered to customers at a temperature not above 50 degree F. were also acted on.

SEATTLE, WASH.—Radical charter amendments have been suggested to the Council's Charter Revision Committee by Cassius M. Williams. The proposition is to separate the legislative and administrative departments of the city, giving the administrative part to the Mayor and various Boards and Commissions. Mr. Williams would have more officials elected from the city-at-large and would eliminate ward politics as much as possible. He would also lengthen the term of office of incumbents and create new offices.

SPRINGFIELD, MASS.—Owing to the fact that the number of city pensioners will largely increase in the future, a new method of meeting the expense will be provided. Hitherto the four men on the pension list have been carried as current expenses of the departments to which they belonged. As the burden becomes greater, however, it seems necessary to keep a separate pension fund for all departments.

WEBB CITY, MO.—For the first time in the history of Webb City, the Collector of Taxes is mailing a postal card notice to each taxpayer stating the amount due for personal, real and poll tax. Collector Johnson says it has involved sending notices to between 7,000 and 8,000 people, but it has already resulted in bringing in quite a number of taxpayers who had never before known that they were required to pay taxes in the city.

WHITE PLAINS, N. Y.—Village President John T. Brown has appointed a commission to prepare a city charter. White Plains with a population of 18,000 is now the largest village in the State.

Refuse Collection and Disposal

DALLAS, TEX.—The sweeping of the paved streets is a thing of the past. The pushcarts of the "white wings" have also been abandoned. Instead there are flushing machines, which clean the street and force the cleanings into a line along the gutter. One-horse carts and trash wagons take the place of the pushcarts. This, Street Commissioner Doran said, is both a more economical and a more efficient service.

DETROIT, MICH.—The Board of Health reports to the Common Council that, in accordance with instructions, it has written to the authorities of a number of cities inquiring as to the method of collecting and disposing of refuse and rubbish in alleys, including stable manure. The information has been received and tabulated. The Board states that a satisfactory solution of this question is only to be found in systematic collection and a sufficient plant or place for its sanitary disposal. The plan should also include the specifying of proper receptacles of uniform description.

NEW ORLEANS, LA.—The second effort to enforce the garbage ordinance requiring the separation of garbage, ashes and paper was made on a day selected by a conference of the city officials, the Woman's Club and the Progressive Union. In spite of the prominence given to the matter and the publication of official notice, it was found that the majority of householders had disregarded the ordinance. The consequence was the collectors refused to take the mixed material and long lines of garbage boxes remained on the sidewalk in all parts of the city. All householders who complained of non-collection of refuse were told that under no circumstances would mixed waste be collected, and moreover that penalties for violation of the ordinance would be enforced.

SACRAMENTO, CAL.—The system of hauling garbage

by a number of contractors to a public cremator does not seem to be working very well at Sacramento. The Secretary of the Scavengers' Association complains that the garbage collectors have to wait too long to unload. He states that the fires in the destructor are not started until 9 A. M. and that it takes an hour to get up a good heat; the crematory is closed at 5 P. M. As a consequence collectors have to wait hours to unload—in some instances all night. Street Superintendent Irvine, on the other hand, contends that the principal trouble comes from the bunching of teams generally in the early morning hours. If the teams came at a regular rate, he says he could take care of them.

Parks and City Beauty

CORTLAND, N. Y.—Under a settlement made of the Randall estate, an agreement was entered into whereby six acres of the Randall tract is to be given to the city to be used as a public park. The property will be laid out in walks, band stands, flower beds and the like, and beautified under the direction of an expert landscape artist. It is said that it will be called Randall Park in honor of the donors.

LAKE FOREST, ILL.—The Young Men's Club recently purchased a tract of land near the central portion of the city. Seven acres of the property were reserved for park purposes and two acres for clubhouse purposes. The rest was divided into building lots and sold at auction to the club members. The results of the sale gave the club \$12,000 towards its building fund, after fully paying for the land. The seven acres have now been deeded to the city and plans for the improvement of same are being made by Howard Evarts Weed, Landscape Architect, of Chicago.

PORTLAND, ORE.—That the City Park Board acquire the land and improve a great hillside parkway along the east slope of the heights from the City Park to the Willamette river in the vicinity of Riverview Cemetery is one of the chief recommendations of John C. Olmsted in a report filed with the Board. Although this would cost a large portion of the \$1,000,000 bond issue, the East Side has not been slighted. It is recommended that a number of local or neighborhood parks be provided, which he believes will give more general and immediate satisfaction to the largest number of citizens.

UTICA, N. Y.—The new Park Commission has been organized under the new State law by the appointment of Charles A. Miller, Charles A. Talcott and Henry A. Davis as Commissioners. The inception of the law creating the Board was due to the fact that Thomas R. Proctor had signified his intention of turning over to the city large tracts of land for park purposes. The Board will have general jurisdiction over all property now or hereafter used for park purposes and the improvement and maintenance of same.

Rapid Transit

BOSTON, MASS.—A trial of new and larger cars was recently made in the subway, and it was found that changes made in the loop were sufficient to permit the large cars to pass with safety. The new cars have a seating capacity of fifty-two persons, as compared with thirty-eight for the largest cars now in use on the Boston elevated system. The cars resemble those used in the East Boston tunnel. When the conductors close the car doors the steps are at the same time removed, making it impossible for any person to get on or off while the car is in motion.

CLEVELAND, O.—In the settlement of the traction war which has been waged in Cleveland for several years, negotiations for which are now under way, the main

problem in fixing values for the basis of turning over all the street railway interests of the city to a holding company is the value of unexpired franchises held by the Cleveland Electric Company. This problem is so speculative and the solution so vital to a settlement of the whole question that it has been decided to appoint experts to fix the value in advance of the general peace conference. William Barclay Parsons, the New York traction expert and designer of the New York subway, was agreed upon to represent the Cleveland Electric Railway Company on this question, and Mayor Johnson within a few days will name an expert to represent the city.

ROCHESTER, N. Y.—An investigation of the speed of trolley cars, instituted by Commissioner Gilman as the result of an accident to two firemen who were recently killed in a collision of a fire wagon and a car, shows that as a result of sixty special reports that the speed of the cars averaged 20.6 miles an hour. The Commissioner has warned the company that the speed limit of 15 miles an hour must be observed.

TOKIO, JAPAN.—The municipality of Tokio has purchased the street railways for £33,750,000. A Socialistic Mayor thus wins a fight that has lasted a year. It remains to be seen whether the effect promised, a reduction in the present fare of 2½ cents, will result.

Miscellaneous

DAYTON, O.—Mayor Wright has attached his signature to the ordinance giving the new Board of Health the power to appoint a Smoke Inspector and his deputies. He has not yet arrived at a decision whether or not he will sign the ordinance increasing the number of members of the Board of Safety.

LOUISVILLE, KY.—An ordinance has been passed regulating the office and defining the duties of the City Buyer. The ordinance is to the effect that the City Buyer shall purchase all supplies used by the city upon requisition of the department for which they are needed. Duplicate invoices must be required for all goods bought and these must be properly checked. No contract for supplies shall extend beyond the fiscal year in which the purchases are made. Whenever articles exceeding \$25 in value are required, public notice must be conspicuously made two days in advance. A joint committee of Councilmen and Aldermen shall examine all lettings. All useless material which is to be disposed of by any department must be sold by the City Buyer. Purchases in excess of \$25 and up to \$2,000 must be approved by the Mayor and by the General Council if in excess of \$2,000.

ST. LOUIS, MO.—The first municipal garage in St. Louis is being erected by the Water Department at King's Highway and Eager road. The building, although small, will be substantial and dignified in appearance. The style of architecture is modern French, the material of the front being white stone. Inside will be storage room for two cars and a repair shop. The plans were drawn by Plan Examiner M. V. Lahey, and nearly all of the material was furnished from buildings that have been wrecked.

TORONTO, ONT.—Mayor Coatesworth has suggested the possibility of establishing what he termed municipal eating houses in Toronto. "If we find that there is need for it, we shall have to make provisions to feed the poor people of the city," said the Mayor. In that case we should have two, or possibly three, large buildings, where we can give food to the people to eat on the premises. These places could be called municipal eating houses. The Mayor stated that outsiders need not expect to come to Toronto to be fed by the municipality, as only bona fide residents would be provided with meals.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

GRADE CROSSINGS

In re Terminal Ry. of Buffalo. Appeal of Town of Cheektowaga.—Railroad Law, Laws of 1897, providing that all surface railroads, "except additional switches and sidings," must be so constructed as to avoid grade crossings where practicable, confers on the Board of Railroad Commissioners authority to eliminate grade crossings, and also to determine how sidings or switches shall be taken over a highway, where a railroad concedes that the Board may deal with them; the quoted words being an exception available to a railroad seeking the benefit of the statute. The Railroad Laws of 1897, authorizing an application to the Board of Railroad Commissioners for alterations in grade crossings, approaches thereto, location of highways, closing of highway crossings, etc., gives to the Board jurisdiction to determine in what manner crossings shall be made, to close a highway and divert the travel thereof to another highway, and to change the grade thereof, subject only to review by the Appellate Court and the Court of Appeals. Where parallel streets extend across railroad tracks, and the crossing is dangerous, the Board of Railroad Commissioners must decide how many viaducts shall be constructed, and determine that the traffic on certain streets shall be diverted into such viaducts, especially where the railroad company will pay the expenses of the construction of the viaducts and the damages resulting to property owners.—Supreme Court, Appellate Division of New York.

STREETS AND DOCKS

City of Buffalo vs. D. L. & W. Ry.—A street once in existence is presumed to continue until it ceases to be such owing to abandonment or some other lawful cause. The erection of a dock by an upland owner over a street, the fee of which is in himself, out to navigable water, is no exception to the rule that an owner cannot destroy a highway over his land by any action of his own, and, if the dock prevents public travel, he can be compelled under the Penal Code and Highway Law, Laws of 1890, to remove the obstruction, and, if it does not, it becomes part of the street.—Court of Appeals of New York.

STREET ACCIDENT—NEGLIGENCE

Canter vs. City of St. Joseph.—Under the Revised Statutes of 1899, requiring as a condition precedent to suing a city for injury from defects in streets, etc., that written notice of the time of the injury be given, a notice erroneously specifying in one place the date of the occurrence as December 4, 1905, was not invalid where the correct date, December 11, 1905, was stated in another part of the notice, as the object of the statute is not to obstruct meritorious causes of action. Plaintiff cannot recover from a city for injury caused by a wheel of her buggy striking an obstruction in a street, after her horse took fright at a passing street car, if she knew the horse was likely to take such fright, and acquiesced in the negligent manner in which her driver, with whom she was seated, was driving, and did not warn him against driving carelessly.—Kansas City Court of Appeals.

SUBURBAN GRADE CROSSINGS

Mayor and Common Council of Newark vs. Central R. Co. of New Jersey.—A court of chancery may compel railroad companies, whose roads cross streets at grade and whose charters contain appropriate provisions, to elevate or depress their tracks, or the highways crossing them. Railroads whose tracks have been laid at grade over streets are lawful structures, and the company cannot be compelled to elevate or depress the tracks, unless by reason of some peculiarity they have become especially dangerous. Where a road in the outskirts of a city had never been laid out or improved, but was only a way over which farmers had carted salt hay from the meadows, and was being presently used chiefly by the employees of one or two factories, and was not within the lines of any contemplated street, but crossed defendant's railroad diagonally and was only two feet above high water, the railroad could not be compelled to construct a viaduct over the road at an expense of from \$17,000 to \$40,000 to supplant the grade crossing.—Court of Chancery of New Jersey.

FRANCHISES—POWER TO GRANT

Hilliard vs. George G. Fetter Lighting & Heating Co., et al.—The Constitution provides that no municipal corporation shall grant any franchise or privilege for a term exceeding twenty years, and that before granting such franchise for "a term of years" the municipality shall advertise for bids and award the franchise to the highest and best bidder. Held, that the words "term of years" did not exclude from the operation of the section a franchise for one year, where it involved the use of permanent structures in a street. A city ordinance, imposing an annual license on corporations selling electricity without a franchise from the city, and providing for the issuance of an annual license on application to the Board of Public Works by a corporation desiring to transmit electricity or heat through the streets, in so far as it authorizes a public lighting and heating corporation to transmit electricity and heat through permanent conduits in a street under yearly licenses, is in violation of the Constitution, prohibiting cities from granting any franchise or privilege for a term of years without advertising and receiving bids therefor.—Court of Appeals of Kentucky.

RECANVASS OF VOTES.

Metz, Comptroller, et al. vs. Maddox and Dayton, Justices of Supreme Court, et al.—The Laws of 1907, providing for the determination by the Supreme Court of an election contest, if construed as providing for a recount and recanvass as described in its title, contravenes Constitution, requiring laws creating officers for counting votes at elections to secure equal representation of the two largest political parties. An appeal to the courts under the general election law authorizing an appeal to the courts to review the action of canvassers in holding ballots void because not marked in accordance with the statute, or to have any protested ballots thrown out, presents only questions of law arising on the face of the ballots for judicial determination. Mandamus lies to compel an election board of canvassers to do its duty, but not to compel it to certify the result by specifying any particular number of votes as cast for one party or the other; the actual determination of the result of the count of ballots being the exclusive province of the board, subject to review by quo warranto.—Court of Appeals of New York.

MUNICIPAL DUTIES OF COUNTY OFFICIALS

Truelove, Treasurer, vs. City of Washington, Ind.—The City and Town Act of March 6, 1905, providing compensation for the County Auditor and County Treasurer for their services required to be performed under that act for a city of the first, second, or third class, which is the county seat, but providing no compensation for services for a city of the first, second, or third class, which is not a county seat, or for a city of the fourth or fifth class, is not in contravention of Bill of Rights, forbidding the grant to any citizen or class of citizens of privileges or immunities which on the same terms shall not equally belong to all citizens.—Supreme Court of Indiana.

ORDINANCE FOR PURCHASE OF LANDS

Sturr vs. Borough of Elmer et al.—A resolution of the Borough Council of the borough of Elmer, providing for the purchase of lands, tends to impose a pecuniary obligation on the borough, and must, under section 27 of the borough act of 1897, be submitted to the Mayor for his approval. It appearing from the testimony that one H., a member of the Borough Council, was indirectly interested in furnishing property to the borough, the resolutions providing for the purchase and payment therefor will be set aside as contrary to the policy and intent of the act approved March 22, 1901.—Supreme Court of New Jersey.

DEBT LIMIT

Reed vs. City of Cedar Rapids et al.—Acts 31st General Assembly, c. 49, limiting the debts of municipal corporations to 1¼ per cent. of the actual value of the taxable property within the corporation, does not apply to special charter cities, the debt limit of which is fixed by the Constitution at 5 per cent. of the taxable or actual value of the property therein. Cedar Rapids City Charter, providing that the Council may borrow money for any object in their discretion, and pledge the faith of the city for the payment thereof, provided the question is decided in the affirmative by a majority of the voters, etc., authorizes such city, after such an election, to borrow money for the erection of a City Hall, and to issue proper evidences of indebtedness therefor. A special charter city may not issue negotiable bonds to secure money which it is authorized to borrow for the construction of a City Hall, without express legislative authority.—Supreme Court of Iowa.

CONDEMNATION PROCEEDINGS

City of Petaluma vs. White et al.—In condemnation proceedings under the statutes of 1877-78, authorizing the trustees of a city to widen a street, land taken was described in the decree as "all that portion of the following described tract of land which is included between the southeasterly line of W. avenue and a line drawn parallel with said boundary line distant 12½ feet therefrom, to wit: that portion of lot 186 as laid down and numbered upon the official map of said city." Held, that the southeasterly line of the avenue referred to must be taken to be the line of the avenue as shown on the official map, and not the line established by fences constructed by occupants of lots, not on the southeasterly line of the avenue, as shown on the map, but to the north thereof. The failure to notify one or more of the landowners in a proceeding to widen a street will not vitiate the proceedings as to those properly notified. Where an owner of land voluntarily accepts the amount awarded in condemnation proceedings for the taking of his land, he waives irregularities in the proceedings, and his act is binding on his successors in interest.—Supreme Court of California.

DISTRIBUTION OF HANDBILLS.

International Text-Book Co. vs. Inhabitants of City of Auburn.—A city ordinance merely providing that "no person shall distribute in any public street or from any buildings handbills, cards, circulars or papers of any description except newspapers," reasonably construed and enforced by the officers as a police regulation only, to protect people on the streets from annoyance, is not unlawful as an interference with interstate commerce as against a concern doing business in another State and desiring to distribute on the public streets circulars advertising such business.—United States Circuit Court, District of Maine.

VALIDITY OF ASSESSMENT

Early vs. City of Ft. Dodge, etc.—Under the code, which provides for an appeal to the district court from a special assessment to determine the validity of the assessment or the proper amount thereof, and that the court upon such appeal may make such an assessment as should have been made, or direct the Council so to do, the court may not only inquire into the validity of the assessment, but it may, if it finds the assessment legal, adjudicate the proper amount thereof. Under the statutes on street improvements, the true rule, while prohibiting an assessment in excess of the benefits to the property, requires that the burdens be distributed ratably and proportionately upon all of the abutting property in the taxing or assessment district, and therefore a property owner is not bound by an assessment merely because it is no greater than the benefit conferred upon his property. In an action by property owners to reduce assessments upon their property, evidence examined, and held to show that the property was not benefited to an amount equal to the assessments, and that the reduction made by the trial court was reasonable and proper.—Supreme Court of Iowa.

SALE OF LIQUOR—CITY REGULATION

Territory ex rel. City of Oklahoma vs. Robertson et al.—Where a dealer in intoxicating liquors has obtained a county license authorizing him to sell such liquors within a city of the first class, such city has no power to refuse a city license to such person upon presentation of his county license, filing his bond with the County Clerk, and paying to the City Treasurer the amount required by the city ordinance for such license. The Mayor and City Council of a city of the first-class may by ordinance regulate the places where intoxicating liquors are sold, and may designate the portions of such city where saloons may be conducted and where they may not, and an applicant for county license in such city must take notice of such ordinance when properly enacted and published.—Supreme Court of Oklahoma.

RECKLESS DRIVING

Foley vs. Northrup.—It is negligence per se for one to drive a horse and vehicle through city streets faster than permitted by a city ordinance, and renders the driver liable to one injured in consequence thereof, even though the driver was an expert and was handling his team in a masterly manner. When defendant recklessly drove at an excessive speed along a city street where people would likely be, and ran into and injured plaintiff, he was liable for the injury, although he did not see plaintiff in the street ahead of him.—Court of Civil Appeals of Texas.

MUNICIPAL APPLIANCES

Telephone Fire Alarm

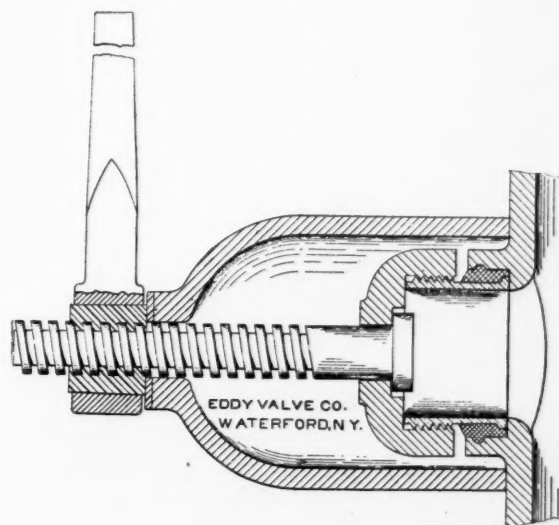
A SYSTEM of utilizing telephones for transmitting alarms of fire in small towns having no Fire Department alarm, or as an auxiliary in larger cities, has been devised and placed on the market by the Denio General Electric Company of Rochester, N. Y. The boxes are operated automatically or by hand. If the subscriber discovers the fire he breaks a glass in the box and pushes a button, notifying the central office. If the fire is not discovered and the temperature rises above a fixed point, about 170° F., the circuit is closed and an alarm turned in. At the central fire station is an ordinary punching register and gong, which indicates the number of the telephone from which the signal has been sent.

Metal Culverts

THE use of corrugated metal road culverts is urged by the manufacturers, the Pennsylvania Metal Culvert Company, Warren, Pa., on the ground of their small original cost, the ease and cheapness with which they can be installed, as well as their durability in use, for they do not crack when filled with ice and are not easily washed out of position by floods. These culverts are simply made of corrugated metal formed into a pipe by rivetting a seam on one side of each section of which the culvert is composed. The regular sizes run from 8 to 72 inches in diameter, and while the usual length is 30 feet they are made in shorter lengths in multiples of two feet. As evidence of the strength of metal culverts, the manufacturers show an illustration of a steam roller resting on a culvert flush with the ground, no indentation of the metal appearing.

Extractor for Hydrant Nozzles

THE adoption of standard fire hydrant nozzles by many municipalities has created a demand for a device by which the old nozzles may be economically removed without injury to the hydrant. The Eddy Valve Company, Waterford, N. Y., has invented a suitable appliance for this work and placed it on the market. It consists of a short section of pipe with thread to fit the old nozzle. This pipe section is attached to a strong stem with a heavy thread working in a bell-shaped casting enclosing the hydrant nozzle and the pipe section which fits it. A wrench with a long handle clamping the stem completes the apparatus. To extract the nozzle the wrench is turned and a strong pull exerted sufficient to bring the packing and calking lead with it and leave the opening ready for the insertion of another nozzle.



NEWS OF THE SOCIETIES

Washington Society of Engineers.—

The annual election of officers was held December 17 at a meeting in the Hubbard Memorial Hall, Sixteenth and M streets northwest. The following officers were unanimously chosen for the ensuing year: President, A. P. Davis, Chief Engineer of the Reclamation Service; Vice-President, D. S. Carll, Chief Engineer of the Capital Traction Company; Secretary, John C. White, Civil Engineer in the Geological Survey; Treasurer, T. F. Hayford, of the Coast Survey. The following directors were also elected: Philander Betts, Dr. T. T. Day, Robert Farnham, Jr., T. E. Woodward, N. O. Leighton and Asa Phillips. It was decided by a large vote of the society to change its headquarters from 729 Fifteenth street northwest to Twelfth and G streets. Following the election of officers and a short business meeting, David B. Rushmore, of the American Institute of Electrical Engineers, delivered a lecture on "The Practice in Long-Distance Power Transmission." According to the lecturer, there will be several power plants in this country the coming year—one in the northwest and another in the southwest—which will be able to transmit 100,000 volts, not quite twice the amount of electricity generated and transmitted to any distance of reasonable length in the United States at present. He asserted that in time such a large quantity of electricity with an improved transmission apparatus will be delivered fully twice as far as is now done.

Civic League of Indianapolis.—The Civic League was finally and permanently organized December 14 at a meeting at the Commercial Club. President John H. Furnas presided over the meeting. He called for a report from the committee on constitution and by-laws and Secretary E. M. Barney read the report. The constitution says the object of the organization shall be the promotion of the civic and moral welfare of Indianapolis and Marion county, Ind. The membership is composed of two classes. All religious or secular bodies in the city or county may elect one delegate each, these delegates to be known as Class A, and shall constitute the voting membership of the league. Class B shall be composed of legal voters of Marion county who are not in Class A. In the by-laws, as they were finally adopted, is this statement of principles:

That this body accumulate, maintain and publish a complete record of all candidates for whom we are entitled to vote.

That this body urge the attendance of the membership of all represented bodies at their respective party primaries.

That this body repudiate the principle that a voter at party primaries is under obligations to support the party candidate as against his convictions.

That this body urge the active support of the nominees whom it shall recommend.

That this body encourage the candidacy for public office of men of character, free from corrupting influence.

That this body shall register an official protest against any failure in law enforcement, or the proper conduct of office by any official, and to commend the faithful performance of duty by any public official.

That this body will at its discretion employ special counsel to assist in the prosecution of any malfeasance in office.

It was decided that the executive committee should consist of ten Class A members and five from Class B. The executive committee is to be advisory to all officers and committees.

Three permanent committees are provided for in the by-laws. They are committees on law enforcement, publicity and legislation, and they will have five members each, to be appointed by the officers of the league. The by-laws define the duties of each committee as follows:

The committee on law enforcement shall plan and direct the work of enforcing the laws and ordinances.

It shall be the duty of the committee on publicity to investigate and report on the records of all candidates for office, to prepare for the public press reports and matters of public interest and to secure the co-operation of the pastors of the city.

It shall be the duty of the committee on legislation to work for the passage of such laws and ordinances as will promote the moral welfare of our citizens.

The officers elected at the first meeting were made permanent officers of the league. They are John H. Furnas, President; H. C. Smith, Vice-President; E. M. Barney, Secretary; Warren D. Oakes, Treasurer.

Civic Federation of New England.—

The third annual meeting which is to be held in the Ford Building, Boston, Mass., on January 9, promises to be one of the most important ever held by the organization. It will be presided over by Lucius Tuttle, head of the Boston & Maine Railroad, who is also president of the federation. "Industrial Education" will be the topic discussed, and a number of men identified with the movement, both from the practical and the theoretical standpoint, are scheduled to speak. These include Prof. Paul Hanus, chairman of the Massachusetts Commission on Industrial Education; J. F. Deems, of New York, superintendent of motive power on the New York Central, and James O'Connell, of Washington, President of the National Association of Machinists. The Rev. Thomas I. Gasson, President of Boston College, may also speak. A reception to members and guests will precede the meeting.

New England Society of the Oranges.

—The present status of the Passaic Valley sewer was the subject discussed at the meeting, December 7, of the society. Joseph Coult, John S. Gibson and Rudolph Hering represented the commission in the discussion. Mr. Hering told of the conditions now existing in the river, of the results of the investigations regarding its purification, and of the final decision to discharge the sewage into New York Bay. Mr. Coult spoke of the natural conditions which allied Newark to the Oranges. He said the existing conditions were intolerable and would have to be remedied. He referred to the proposition that New York would object to the sewer emptying into the bay as "annoying impudence." "They are going to put more sewage into the Hudson River from the Bronx than the entire flow of the proposed trunk sewer."

Calendar of Meetings

December 17-21.

Cement Products Exhibition Company.—First annual cement show. Colliseum, Chicago, Ill.—L. L. Fest, Manager, Michigan avenue and 13th street, Chicago, Ill.

December 18.

American Society of Civil Engineers.—Semi-monthly meeting at the House of the Society.—Charles Warren Hunt, Secretary, 220 West Fifty-seventh street, New York City.

December 18.

Municipal Engineers of the City of New York.—Regular meeting. Engineering Societies Building, 29 West Thirty-ninth street, New York.—C. D. Pollock, Secretary.

December 26.

International Sanitary Convention of American Republics.—Third international meeting, Mexico City.—Surgeon General Walter Wyman, Chairman International Sanitary Bureau, Public Health and Marine Hospital Service, Washington, D. C.

December 28-31.

American Economic Association.—Twentieth annual meeting, Madison, Wis.—Winthrop M. Daniels, Secretary, Princeton, N. J.

December 30-January 4.

American Association for the Advancement of Science.—Annual meeting, University of Chicago, Chicago, Ill.—L. O. Howard, Secretary, Cosmos Club, Washington, D. C.

January 8-10.

National Commercial Gas Association, New York City.—Gas exhibition and convention.—Lucius Bigelow, Secretary, 265 Broadway, New York City.

January 14-16.

Illinois Clay Workers' Association.—Thirtieth annual convention, Peoria, Ill.

January 15.

American Society of Civil Engineers.—Annual meeting, New York City.—Charles Warren Hunt, Secretary, 220 West Thirty-seventh street, New York City.

January 15-17.

Illinois Society of Engineers and Surveyors.—Annual meeting, Champagne, Ill.—E. E. R. Tratman, Secretary, 1636 Monadnock Block, Chicago, Ill.

January 16-18.

Indiana Engineering Society.—Annual meeting, Indianapolis.—Charles C. Brown, Secretary, 408 Commercial Club Building, Indianapolis.

January 20-25.

National Association of Cement Users.—Fourth annual convention at Buffalo, N. Y.—W. W. Curtis, 585 Caxton Bldg., Chicago, Secretary; Dai H. Lewis, 760 Main street, Buffalo, N. Y., Convention Manager.

January 21-23.

American Society of Heating and Ventilating Engineers.—Annual meeting, Engineering Societies Building, 29 West Thirty-ninth street, New York City.—W. M. Macay, Secretary, 29 West Thirty-ninth street, New York.

January 22-23.

Iowa Brick and Tile Association.—Twenty-seventh annual convention, Des Moines, Iowa.—C. B. Platt, Secretary, Van Meter, Iowa.

February 3-4.

American Ceramic Society.—Twenty-second national convention, Hartman Hotel, Columbus, O.—Theo. A. Randall, Secretary, Indianapolis, Ind.

February 3-4.

National Paving Brick Manufacturers' Association.—Southern Hotel, Columbus, O.—Theo. A. Randall, Secretary, Indianapolis, Ind.

PERSONALS

ACKERMAN, WILLIAM S., Newark, N. J., and Julius A. Lebkeucher, of the Passaic Valley Sewerage Commission, accompanied by Rudolph Hering, who is preparing the plans for a trunk sewer, have visited Boston, Mass., to examine the Metropolitan Sewerage System.

AHEARN, JOHN F., President of the Borough of Manhattan, New York City, who was removed by order of Governor Hughes, was re-elected to the position by the Aldermen representing the borough, but Mayor McClellan refuses to recognize him as a member of the Board of Estimate and Apportionment.

ASHDOWN, JAMES H., was re-elected by acclamation Mayor of Winnipeg, Canada. Other Mayors elected in the Province of Manitoba were: Portage, E. Brown; Gladstone, C. F. Gabriel; Deloraine, J. H. Mather; Selkirk, J. W. Simpson; Rapid City, H. Lockhart; Hamiota, Mayor Chambers; Hartney, W. H. B. Hill.

BOWMAN, AUSTIN LORD, Consulting Civil Engineer, has been appointed Consulting Engineer to the Department of Bridges of New York City, succeeding Henry B. Seaman, who recently resigned to become Chief Engineer of the New York Public Service Commission, First District.

BRADWAY, CHARLES W., Mayor-elect of Putnam, Conn., who was nominated against his wishes, will not take the oath of office

on January 6, as he has been compelled to live in the South during the winter in an endeavor to save his life. He is 60 years of age and has not taken a vacation in over thirty years. The new Council will elect a President, who will exercise all the powers and duties of Mayor during the term.

BUHRER, STEPHEN, Mayor of Cleveland, O., from 1867 to 1871, died recently at his home in the Forest City.

CLARKE, WILLIAM P., Mayor of Newport, R. I., has been elected, without opposition, for a second term, at the second election under the new form of government; ex-Mayor Patrick J. Boyle was reelected a member of the Board of Aldermen, as were J. B. Cottrell, H. B. Kingman and William Shepley, while Benjamin M. Anthony was elected to succeed Alderman De Lancey Kane, who was not a candidate, over four other candidates.

CLAYBROOK, J. P., City Engineer of Louisville, Ky., has been reappointed, and Dr. Jouett Menefee has been reappointed Superintendent of the City Hospital. Other appointments are: H. T. Chittenden, Superintendent of Street Cleaning; James H. Hembrich, Superintendent of Pump Department; James Phalen, Foreman Street Cleaning Department.

COOK, CHRISTOPHER, Haverhill, Mass., has been appointed Inspector of Buildings, vice James W. Harris, who refused to accept the nomination.

CULLINAN, THOMAS M., former City Attorney of Bridgeport, Conn., has been elected again to the position by the Council and the salary has been increased from \$1,800 to \$2,500 per annum. Counsel for Mayor Lee advised him that appointment did not lay with the Mayor, but by election of Council.

ELDRIDGE, M. N., Portland, Me., has been re-elected Chief Engineer of the Fire Department of Portland, Me.; Walter H. Dresser has been made Chief of Police; A. L. T. Cummings, City Clerk; George W. Hardy, City Electrician; Samuel S. Gilbert, City Treasurer; Charles B. Thurston, City Auditor; John T. Fagan, City Attorney, and Alderman A. E. Neal, Gas Agent.

GRANT, W. F., City Engineer of Sault Ste. Marie, Mich., and Miss L. H. Miller were married recently.

GRENET, SAMUEL J., Assistant Director, Department of Public Safety, Pittsburg, Pa., who has had charge of the Public Works Department of Allegheny, has been removed by Mayor George W. Guthrie.

LYDECKER, GARRETT J., Colonel, Corps of Engineers, U. S. Army, who was from 1882 to 1886 Engineer Commissioner of the District of Columbia, and who was identified with the construction of the tunnel designed to carry water from the distributing reservoir at Georgetown to the Washington city reservoir, near Howard University, who also had charge of the Washington aqueduct and its extensions from 1882 to 1889, and who recently has had charge of river and harbor work in the vicinity of Detroit, Mich., has been placed on the retired list with the rank of Brigadier General, the advance being due to his service during the Civil War.

MCLELLAN, DR. E. A., Health Officer of Bridgeport, Conn., resigned the position and was subsequently re-elected for a four-year term at a salary of \$1,500, in accordance with the provisions of the new charter. Dr. A. C. Knapp has been elected Milk and Meat Inspector for a term of four years, also being given permission to continue his practice as a veterinary surgeon. A clerk of the Health Board is to be chosen at a salary of \$1,500 per annum, thus relieving the City Clerk from these duties, which he performed under the old charter.

MERCADER, LEOPOLD, formerly an Assistant Engineer in the United States highway work, has been appointed Bridge Inspector of the Department of the Interior of Porto Rico.

NEWELL, FREDERICK H., Chief Engineer of the United States Geological Survey, which has in charge the expenditure of the Lawton site fund, was in Lawton, Okla., recently, looking over the grounds for the extension of the water system, and with a committee of the City Council and the City Engineer traversed the survey of the pipe line to the mountains and examined the dam site where the reservoir for the new supply will be located, and as a result has recommended that the War Department make appropriation to assist the city, which has issued \$200,000 bonds, in making a greater system, so that Fort Sill can also be supplied.

PIEPER, CHARLES H., City Engineer of San Jose, Cal., in an address before the League of California Municipalities at Los Angeles on "Cement—Its Use and the Proper Method of Testing and Using It," claimed that the city of San Jose was the first place in the United States, after the research work done by the Federal Government, to test and use cement for construction work, his father, the late J. H. Pieper, who was at the time City Engineer of San Jose, having in 1880 made the first test outside of a Government laboratory, using an old-fashioned butcher's steel-yard in testing for tensile strength. Charles H. Pieper is also a great advocate of cement sewers and while in Los Angeles visited in company with City Engineer Hamelin the sewer work under construction there, and is further convinced that cement sewer is the most modern idea, has been tried and found perfect, and will give the most satisfaction.

TRADE NOTES

Flexible Drill.—A flexible rock drill operated by gasoline has been invented by L. L. Scott of Joplin, Mo. The drill is believed to be valuable in tunnel work. It is complete in itself, not connected with a piston and without connection by long pipes, as is the case with steam and air drills. The drill can be easily carried from place to place, is said to cost half as much as an ordinary drill and to reduce operating expenses by 80 per cent.

Centrifugal Pumps.—The Allis-Chalmers Company, Milwaukee, Wis., in Bulletin No. 1608 describes its single stage, motor driven centrifugal pumps. As they are valveless and operate with little vibration, they are useful for many kinds of services where pumps of other types are the cause of considerable annoyance and expense. Where rapid circulation of large quantities of water is desired and where the liquid handled contains solid substances such as bits of wood and sand, the pumps offer an easy solution of the ordinary difficulties.

Increase of Capital.—The Chapman Valve Company, Indian Orchard, Mass., through a recent meeting of the stockholders, decided to increase its capital stock by \$200,000, or from \$800,000 to \$1,000,000. The increase, according to a director of the company, was made to cover the expense of new buildings that have recently been built, and to cover the cost of other special expenses. The original capitalization of the company was \$100,000, and it has been raised at various times, the last occasion being November 29, 1906, when it was raised from \$600,000 to \$800,000.

Cast Iron Pipe Prices.—Chicago, Ill. All but one of the furnaces of the U. S. Cast Iron Pipe and Foundry Co. in operation. Miscellaneous orders for small lots constitutes bulk of the business. No large lettings reported. Quotations: Water pipe, per ton: 4-inch, \$34; 6 to 12-inch, \$33; 16-inch and up, \$32, with one dollar extra for gas pipe. Birmingham, Ala. A sale of twelve miles of 12-inch pipe for West St. Louis, Mo., is reported but not verified. Several Pacific Coast cities are reported in the market. Quotations, per ton: 4 to 6-inch, \$30; 8 to 12-inch, \$29; over 12-inch, average, \$26, with \$1 extra for gas pipe. New York. Trade quiet. Foundrymen expect 1908 will be a fair year, as much work that has been laid out must be done. Quotations: 6-inch, car-load lots, \$30 at tidewater. Large lots could be placed at some concession from this price.

Pig Lead.—Sales of spot have been made at 3.50 cents, New York, which also seems to be the bottom at present for shipments. This represents a drop of 2.82 cents from the highest price of the year, 6.32½ cents. The lowest price in recent years was 2.50 cents, paid in 1895 and 1896. The market in the West is also lower at 2.35 cents, St. Louis. Miners are reducing their forces still further.

Westinghouse Affairs.—Following several conferences between the receivers and creditors of the Westinghouse concerns, with a view of giving the affairs of the companies back to the stockholders, George Westinghouse, President of the various companies, said: "We think everything is in splendid condition. Not only was the report of the receivers satisfactory, but plans formulated for working out all details of the problem seemed to meet with favor. Everything connected with the affairs of the corporations show a most hopeful situation. A detailed report on all these matters may be made public soon."

New Alarm System Installed.—The Gamewell Fire Alarm Telegraph Company has recently installed a system in Virginia, Minn. A test made in the presence of Mayor Eaton and Chief of the Fire Department Stevens proved satisfactory. The cost of the system is estimated at \$6,000, but it is leased to the city at an annual rental. When the rents amount to the purchase price, ownership will be transferred to the city. This plan is said to have been adopted in order to avoid letting the contract to the lowest bidder, which the Council thought would result in the selection of an inferior system.

Refuse Destructor.—Messrs. Heenan and Froude, Limited, Manchester, England, have recently received an order from the Borough of Bury-St-Edmunds, England, for a two-cell destructor. The order was received after the surveyor, W. D. Harding, had made a favorable report, which was unanimously adopted by the Council. The plant, which is of the back shovel feed type, will consist of one unit of two cells, combustion chamber, Babcock & Wilcox boiler, fitted with Foster patent superheater, regenerator, and fan and engine for forced draught. It will be capable of dealing with thirty tons of refuse per day of twenty-four hours. The steam raised will be utilized in connection with the electricity generating station, which is situated in close proximity to the proposed site of the refuse destructor.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Street Improvements				
Dist. of Col'bia.	Washington.	December 26, 2 P.M.	Furnishing 6 x 20-in. granite curb to June 30, 1908.	Jay J. Morrow, Eng'r Com'r.
California.	Sierra Madre.	December 26, 8 P.M.	Grading, oiling, cement curb, etc., Central Ave.	J. J. Graham, City Clerk.
Pennsylvania.	Harrisburg.	December 26.	Constructing five roads, Mercer, Schuylkill and Fayette Cos.	Jos.-W. Hunter, St. Highway Com'r.
New Jersey.	New Brunswick.	December 27, 11 A.M.	Constructing 7 stone and gravel roads, total 62,409 ft. long.	M. F. Larson, 1erth Amboy, Co. Eng.
Maryland.	Baltimore.	December 27, 11 A.M.	Grade, curb, gutter pave, brick, asphalt, etc., Konig St.	Com'rs for Opening Sts.
Pennsylvania.	Harrisburg.	December 27.	Constructing road in Amity township, Berks County.	Jos. W. Hunter, St. Highway Com'r.
Wisconsin.	Racine.	December 28.	Grading and paving a portion of Fifth St.	P. H. Connolly, Chm. Bd. Pub. Wks.
Colorado.	Jamestown.	December 28.	Bldg. and repairing 2 miles of Co. wagon road.	T. W. Jaycox, Denver, State Eng'r.
New York.	New York.	December 30, 2 P.M.	Furn. material and restoring artificial stone walks, curb, etc.	J. H. O'Brien, Com'r W. S., G. & E.
Ohio.	Columbus.	December 30.	Grading, curb, paving, brick, asphalt, etc., about 15 streets.	E. F. McGuire, Sec'y Bd. Pub. Serv.
California.	Fort Rosecrans.	December 31.	Constructing macadam roadway and gutters.	Lt. B. H. L. Williams, Q.M., U. S. A.
Pennsylvania.	Harrisburg.	December 31.	Constructing work in Wyalusing township, Bradford Co.	Jos. W. Hunter, St. Highway Com'r.
Arkansas.	Little Rock.	January 2, noon.	Constructing W. 12th St., distance of 10,683 feet.	Gerhard Morgner, Eng'r in Charge.
New Jersey.	Jersey City.	January 2, 12:15 P.M.	Furnishing 2,500 yds. broken stone, 1,000 yds. road gravel, 1,000 yds. Pike Co. shale and other supplies during year.	John C. Sweeney, Clk. Bd. Com'rs.
Connecticut.	Ridgefield.	January 2, 2 P.M.	Grading and graveling section of road.	Geo. H. Whitlock, First Selectman.
Tennessee.	Fayetteville.	January 2.	Constructing concrete pavements.	W. G. Kirkpatrick, Jackson, Miss., Civil Engineer.
New Jersey.	Jersey City.	January 2.	Furn. supplies during year: 2,500 yds. broken stone; 1,000 yds. road gravel; 1,000 yds. shale.	Jno. C. Sweeney, Clk. B't'v'd Com'rs.
Utah.	Salt Lake City.	January 3, 8 P.M.	Grading, paving and curbing First South St., inc. 60,000 cu. yds. grading, 17,000 lin. ft. curb, 41,000 sq. yds. asphalt.	Louis C. Kelsey, City Engineer.
Ohio.	Cleveland.	January 4, 11 A.M.	Grading, draining and paving Fisher and Dille roads.	A. B. Lea, County Engineer.
Ohio.	East Liverpool.	January 4, 1 P.M.	Grading highway from E. Liverpool to Lisbon; 30,000 cu. yds.	R. G. Boyd, Chm. Bd. Com'rs.
Indiana.	Logansport.	January 6, 10 A.M.	Improving roads five miles long in Deer township.	George W. Conn, County Auditor.
Indiana.	Danville.	January 6, 11 A.M.	Building gravel road 14,508 feet long.	David D. Mills, County Auditor.
Alabama.	Montgomery.	January 6, noon.	Paving asphalt, brick, etc., sidewalks, curb, sewers, Hull St.	A. R. Gilchrist, City Engineer.
Indiana.	Crown Point.	January 6, noon.	Constructing two gravel roads in North Township.	County Commissioners.
Indiana.	Lebanon.	January 6, 1 P.M.	Constructing Martin gravel road, 0.254 ft. long, Clinton twp.	Board of County Commissioners.
Indiana.	Vincennes.	January 7, 2 P.M.	Bldg. 104,602 ft. gravel road in Decker, 10,567 ft. Vincennes Townships.	John T. Scott, Co. Auditor.
New Jersey.	Irvington.	January 7, 8 P.M.	Laying 2,000 ft. new or second-hand cross walks, 18-in. cobble.	M. Stockman, Town Clerk.
Indiana.	Versailles.	January 7.	Constructing two miles of macadam road in Ripley Co.	Nicholas Volz, County Auditor.
Minnesota.	Virginia.	January 7.	Constructing 6 miles of roadway; Portage to Pelican.	W. A. James, Clk. Town of James.
Indiana.	Knox.	January 10.	Constructing 14 miles of gravel roads.	Lee M. Ransbottom, Co. Auditor.
Maryland.	Port Washington.	January 10, 2 P.M.	Resurfacing macadam roads in post.	Constructing Quartermaster.
Indiana.	Noblesville.	January 11, 10 A.M.	Draining and graveling 2 roads; costs, \$3,401 and \$3,610.	N. W. Coghill, County Auditor.
Idaho.	Lewiston.	January 16, 10 A.M.	Constructing J. Roth road in Road District No. 8.	W. L. Gifford, City Clerk.
Pennsylvania.	Washington.	January 17, noon.	Bldg. improved roadbed, culverts, bridges, etc., 3 miles road.	H. R. Campbell, County Clerk.
Pennsylvania.	Erie.	February 4, 3 P.M.	Brick paving, concrete walls, etc., steamboat landing.	H. T. Leasure, Sec'y Dock Com.
Montana.	Billings.	February 4, 5 P.M.	Constructing 86,653 sq. yds. gravel macadam; 3,000 lin. ft. sewer, complete, etc., 17,400 lin. ft. gutter, complete.	J. D. Matheson, City Clerk.
Montana.	Billings.	February 4, 8 P.M.	Constructing 6,305 sq. yds. shale brick pavement.	J. D. Matheson, City Clerk.
California.	Santa Monica.	February 15.	Asphaltum, 2,000 sq. yds. on concrete, inc. curb, etc., \$6,000.	Thomas H. James, City Engineer.
Water Supply				
Kansas.	Ft. Leavenworth.	December 27, 11 A.M.	Constructing water mains in post.	Capt. J. E. Normoyle, Q. M.
New Jersey.	Overbrook.	Dec. 27, 2:30 P.M.	Installing water main and fire hydrants, hosp. bldgs.	E. C. Eaton, Bd. Freeholders, New'k.
New York.	Rochester.	December 27, 10 A.M.	Constructing gate house at Colt's Hill reservoir.	F. X. Piper, Clk. Bd. C. & S.
Minnesota.	Sauk Rapids.	December 27, 8 P.M.	Installing a water works system.	Oscar Clausen, St. Paul, Cons. Eng'r
Dist. of Col'bia.	Washington.	December 30.	Furn. c. i. pipe specials and gate valves; circ. 409-A.	H. F. Hodges, C. P. A., Ist. Canal Commission.
Maine.	Norway.	December 31.	Constructing 1,000,000 gal. reservoir.	S. D. Andrews, Pres. Water Co.
New Jersey.	Orange.	January 1, noon.	Suction and delivery pipe connection of pumping engine; also for steam and feed water, piping, Chestnut St. station.	Willett B. Gano, City Clerk.
British Col'bia.	Vancouver.	January 2, 4 P.M.	Furnishing brass goods and galvanized iron pipe.	William McQueen, City Clerk.
Manitoba.	Winnipeg.	January 2.	Furn. and installing air compressing machinery, well No. 1.	H. N. Ruttan, City Engineer.
Indiana.	Port Wayne.	January 6.	Purchase of 4 tubular boilers, now in service.	Board of Public Works.
North Dakota.	Fargo.	January 6.	Constructing 6-in. water mains in certain streets.	N. C. Morgan, City Auditor.
Oklahoma.	Guthrie.	January 7.	Establishment of filtration system, capacity 1,000,000 gals. per day; also furn. 4-, 6-, 8-in. c. i. pipe for extending mains.	C. M. Barnes, Mayor.
Arizona.	Tucson.	January 8, 8 P.M.	Furnishing material and constructing water works system.	Frank S. Treat, City Clerk.
New Jersey.	Morris Plains.	January 9.	Furn. 1,500 ft. 6-in. water main, tees, hydrants, etc.	Geo. W. Jagle, Chm. State Hospital.
Arizona.	Phoenix.	January 10, 4 P.M.	Laying cast-iron water pipe.	Robt. A. Craig, Supt. Water Dept.
North Carolina.	Maxton.	January 15.	Bldg. water works and sewer system; cost \$50,000.	R. M. Williams, Mayor.
Nebraska.	Wood River.	January 15.	Constructing water works and electric light plant; cost, \$17,000.	D. D. O'Kane, Village Clerk.
Manitoba.	Winnipeg.	January 15.	Furnishing 15 miles of assorted water pipe.	H. N. Ruttan, City Engineer.
Illinois.	Aurora.	January 17.	New air compressor for pumping station.	M. J. Tarble, City Engineer.
Colorado.	Las Animas.	February 1.	Constructing water works, to cost \$67,000.	W. R. Murphy, City Engineer.
Sewerage				
Ohio.	Springfield.	December 26, noon.	Bldg. sewer in Ludlow Ave. and Burt Street.	F. A. Crothers, Clk. Bd. Pub. Serv.
Ohio.	Cleveland.	Dec. 26, 2:30 P.M.	Bldg. deep drainage sewer around County Court House.	Walter P. Rice Eng. Co.
Illinois.	Elgin.	December 26.	Storm and sanitary sewers, inc. 3104 ft. 18 to 16-in. vit. pipe.	Carl E. Plum, City Engineer.
Dist. of Col'bia.	Washington.	Dec'ber 27, 10:30 A.M.	Furn. sanitary fixtures, valves, wrought iron pipe, conductor pipe, bar iron, copper, tools, etc., Ist. Canal Com.	H. F. Hodges, Gen. Pur. Agt.
Ohio.	Youngstown.	December 27, noon.	Bldg. sewer in Mahoning ave. 1 1/2 miles city limits to river.	W. H. McMillin, Clk. Bd. Pub. Serv.
Ohio.	Akron.	December 27, noon.	Constructing sewer in Getz St., from Miller Ave., etc.	Chas. H. Watters, Sec'y Bd. Pub. Serv.
Illinois.	Wilmette.	December 27, 8 P.M.	Constructing extensive relief sewer system in village.	Superintendent of Public Works.
Indiana.	Evansville.	December 28, 2 P.M.	Bldg. Sewer in Seventh Ave. bet. Franklin and Lamasco Sts.	W. F. Wunderlich, City Clerk.
Illinois.	Chicago.	December 30, 11 A.M.	Furn. and erecting 3 water tube boilers, complete.	John J. Hanberg, Com'r Pub. Wks.
Connecticut.	Hartford.	December 30, 2 P.M.	Bldg. Sec. B Homestead Ave., intercepting sewer; 2,800 ft. concrete or brick conduit in 4' 0" tunnel; cost, \$17,500.	F. L. Ford, City Engineer.
Minnesota.	St. Paul.	December 30, 2 P.M.	Constructing sewer in Maryland St., West Ave. to Como bvd.	R. L. Gorman, Clk. Bd. Pub. Works.
Ohio.	Canton.	January 3, noon.	Bldg. storm sewers E. 4th St., requiring several thousand feet 36, 24, 20, 18, 15 and 12-in. vitrified pipe.	D. F. Faust, Clk., Bd. Pub. Serv.
Utah.	Salt Lake City.	January 3, 8 P.M.	Pipe sewers in Extension No. 101.	L. C. Kelsey, City Engineer.
Ohio.	Cincinnati.	January 3.	Constructing culverts Cooper Ave. and in Seymour twp.	Fred Dreihis, County Clerk.
South Dakota.	Hot Springs.	January 3.	Furnishing vitrified pipe.	W. A. Tucker, Treas. N. H. D. V. S.
Alabama.	Montgomery.	January 6, noon.	Constructing storm water sewers, paving, etc., Hull St.	A. R. Gilchrist, City Engineer.
Minnesota.	Hanley Falls.	January 6, 8 P.M.	Constructing sewers, according to plans, etc.	J. M. Hardy, Village Recorder.
Colorado.	Durango.	January 6, 9 P.M.	Constructing three sanitary sewers in Dist. No. 1.	Herman Berndt, Mayor.
Iowa.	Creston.	January 7.	Furn. steel pipe, cement, etc., for sewers during year.	W. F. Craig, County Auditor.

Sewerage—Continued.

Ohio.....	Steubenville.....	January 13.....	Constructing sewer in Fifth St.; also in several alleys.....	T. W. Vance, Clk. Bd. Pub. Serv.
Iowa.....	Clinton.....	January 14.....	Bldg. 3,500 ft. 12 to 36-in. sewer, 46 catch basins, etc.....	Charles P. Chase, City Engineer.
Kansas.....	Fredonia.....	January 15, 6 P.M.....	Furnishing material and constructing system of sewers, including septic tank.....	Burns & McDonnell, Kan. City, Mo.
North Carolina.....	Maxton.....	January 15.....	Constructing \$50,000 sewer system and water works.....	J. M. Bandy, Laurinburg, Engr.
Philippine Isds.....	Manila.....	January 19, noon.....	Twelve pumps and motors for new sewer system.....	J. F. Case, Chief Engineer.
Montana.....	Billings.....	February 4, 5 P.M.....	Sewer, 3,000 lin. ft., 12 manholes, 15 catch basins, etc.....	J. D. Matheson, City Clerk.

Public Buildings

New York.....	New York.....	December 26, 3 P.M.....	Alterations Bd. Educ. Auditorium.....	C. B. J. Snyder, Supt. Sch. Bldgs.
Washington.....	Tulalip.....	December 27, 2 P.M.....	Bldg. dormitory, hospital, power house, etc., Indian School.....	Chas. M. Buchanan, Supt.,
Minnesota.....	Halloch.....	December 27.....	Erecting 2-story brick and concrete school building.....	N. P. Lundgren, Clerk Bd. Educ'n.
Connecticut.....	New Haven.....	December 27.....	Erecting school, 111 Greene St., separate bids.....	G. T. Hewlett, Sec'y Bd. Educ.
Ohio.....	Cincinnati.....	December 27.....	Remodeling steam heating building on Freeman Ave.....	Sam'l Hannaford & Sons.
Pennsylvania.....	Allentown.....	December 27.....	Constructing addition to County jail.....	County Commissioners.
Wisconsin.....	Milwaukee.....	December 28, 3 P.M.....	Constructing new auditorium; revised plans.....	E. V. Koch, Building Inspector.
Kansas.....	Viola.....	December 29, 6 P.M.....	Erecting 2-story, 4-room brick school.....	Chas. J. Dalborn, Clk., School Dist.
Pennsylvania.....	Lancaster.....	December 30, 3 P.M.....	Erecting, complete, extension to U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Pennsylvania.....	Edwardsville.....	December 30.....	Constructing borough hall.....	E. Lewis, Chm., Wilkes-Barre, P. O.
New York.....	Philmont.....	December 31.....	Erecting addition to school building.....	J. F. Yerrick, Clk. Bd. Education.
Illinois.....	Paris.....	December 31.....	Erecting a \$60,000 high school.....	Reeves & Baillie, Peoria, Archts.
Maine.....	Orono.....	January 1.....	Constructing, inc. plumbing, Agricultural Bldg., Univ. of Maine.....	Wm. Hart Taylor, Boston, Mass., Architect.
Pennsylvania.....	Indiana.....	January 1.....	Two-story school 110 x 140 ft., to cost \$100,000.....	C. C. & A. L. Thayer, New Castle Archts.
Michigan.....	Flint.....	January 2, noon.....	Constructing a City Hall; cost \$65,000 or \$75,000, except heating and lighting.....	D. E. Newcombe, City Clerk.
Indiana.....	South Bend.....	January 2, 3 P.M.....	Erecting extension and remodeling U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	Milwaukee.....	January 2, 5 P.M.....	Razing old school and erecting new \$75,000 building.....	F. M. Harbach, Sec'y Sch. Directors.
New Mexico.....	Albuquerque.....	January 3, 3 P.M.....	Constructing, inc. plumbing, heating, etc., U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Oklahoma.....	Oklahoma City.....	January 3.....	Erecting a library to cost about \$25,000.....	E. P. Phelps, Librarian.
Missouri.....	Springfield.....	January 4.....	Building a Fire Department headquarters.....	Wm. Canada, Chief, Fire Dept.
Ohio.....	Cincinnati.....	January 6, noon.....	Constructing new high school, Clinton Ave. & McMillan Street.....	Dr. J. M. Withrow, Chm. Bldg. Com.
Kansas.....	Wichita.....	January 6, 3 P.M.....	Erecting, complete, extension to Federal Building.....	James Knox Taylor, Wash., D. C.
Michigan.....	Coopersville.....	January 6.....	Constructing a \$16,000 school.....	F. E. Payne, Sec'y Bd. Educ'n
Ohio.....	Madisonville.....	January 6.....	Erecting a \$100,000 school.....	J. F. Klein, Clk., Bd. Educ.
Dist. of Col'bia.....	Washington.....	January 7, 3 P.M.....	Construction, inc. plumbing, heating apparatus, etc., and remodeling hygienic laboratory of U. S. Marine Hospital Service.....	Bureau Yds. & Docks, Navy Dept.
Minnesota.....	Slayton.....	January 7, 8 P.M.....	Erecting brick addition to school, Dist. No. 52.....	B. H. Whitney, Clk. School Bd.
New Jersey.....	Trenton.....	January 8, 3 P.M.....	Steam-heating apparatus, etc., for Federal Building.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	Coloma Station.....	January 10, 8 P.M.....	Labor and material for erecting school building.....	C. H. Williams, Portage, Architect.
Ohio.....	Columbus.....	January 10.....	Furn. material and erecting greenhouse in Schiller Park.....	E. F. McGuire, Sec'y Bd. Pub. Serv.
Arkansas.....	Fort Smith.....	January 11, noon.....	Erecting a \$65,000 school; 16-room, 2 story and basement.....	A. Klingensmith, Architect.
New York.....	Fort Wood.....	January 13, 11:30 A.M.....	Erecting, complete, double set Captain's quarters.....	G. C. Burnell, Q. M., U. S. A.
Nebraska.....	York.....	January 14, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Michigan.....	Flint.....	January 15, noon.....	Erecting 12-room grade school, except heat and ventilating.....	W. C. Lewis, Sec'y Bd. Education.
Texas.....	Houston.....	January 15, 3 P.M.....	Constructing, complete, Federal Building.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	Brillion.....	January 15.....	Bldg. 2-story and basement, pressed brick school; cost, \$12,000.....	C. H. Tegen, Manitowoc, Archt.
Ohio.....	East Liverpool.....	January 17, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
North Carolina.....	Asheville.....	January 20, 3 P.M.....	Constructing, complete, Federal Building.....	James Knox Taylor, Wash., D. C.
Virginia.....	Richmond.....	January 20, 3 P.M.....	Constructing new high school building; cost \$350,000 to \$400,000.....	Chas. K. Bryant, Architect.
Georgia.....	Gainesville.....	January 21, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
South Dakota.....	Mitchell.....	January 22.....	Construction, inc. plumbing, wiring, etc., U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Illinois.....	Chicago.....	January 28, 11 A.M.....	Erecting brick and stone isolation hospital; separate bids.....	John J. Hanberg, Com'r Pub. Works
Georgia.....	Cairo.....	February 1.....	Erecting \$40,000 County Court House; also \$13,000 jail.....	Alex. Blair, Macon, Architect.
Illinois.....	E. St. Louis.....	February 1.....	Erecting school, to cost \$65,000.....	Riester & Rubach.
North Carolina.....	Durham.....	February 1.....	Erecting \$140,000 hospital, donated by Geo. W. Watts.....	Kendall, Taylor & Stevens, Boston, Mass.
Arkansas.....	Conway.....	February 15.....	Erecting a \$40,000 school building.....	City Clerk.
Massachusetts.....	S. Hadley Falls.....	February 22.....	Competitive plans for combination Town Hall and School bldg; also for 4-room school, with assembly hall, etc.....	M. J. Judge, Sec'y Sp. Com.

Bridges

Indiana.....	Peru.....	December 26.....	Erecting two concrete arches.....	Chas. Griswold, County Auditor.
Ohio.....	Piqua.....	December 27, 10 A.M.....	Furn. material and erecting superstructure hand lift bridge over canal, inc. 30 ft. roadway, two 8-ft. walks, 150 lbs. capacity, with plans; also substructure.....	E. E. Pearson, Troy, Co. Auditor.
Maryland.....	Baltimore.....	December 27, 11 A.M.....	Erecting concrete bridge over Gwynn's Falls Valley.....	B. T. Pendall, City Engineer.
Missouri.....	Memphis.....	December 27.....	Erecting 32-ft. span, Fence bridge, Tobin township.....	C. C. Critz, County Commissioner.
New Jersey.....	Mt. Holly.....	December 27.....	Bldg. bridge over Crosswicks Creek; 4 propositions.....	Burlington & Mercer Co., Freeholder.
Minnesota.....	Little Falls.....	December 28, 10 A.M.....	Repairing Platte river bridge.....	Thomas O'Neill, Town Clerk.
Kansas.....	Randolph.....	December 28.....	Constructing 30-ft. concrete arch bridge over Walnut Crk.....	J. H. Johnson, Clk., Jackson towns'p.
Indiana.....	Indianapolis.....	December 30, 10 A.M.....	Bldg. concrete abutments and pier for bridge over Eagle Creek; also two concrete steel culverts.....	C. J. Clark, County Auditor.
Georgia.....	Savannah.....	December 30, noon.....	Erecting steel highway drawbridge over river at Kings Ferry.....	G. Reuben Butler, County Clerk.
British Col'bia.....	Victoria.....	December 31.....	Furn. f. o. b. scow Vancouver all metal work for superstructure steel swing span; also piles, etc.....	F. C. Gamble, Pub. Wks. Eng'r.
China.....	Canton.....	December 31.....	Constructing steel cantilever and girder bridge, 1,102 ft. long, in the Front Reach, Canton.....	Canton River Bridge Co.
Kansas.....	Topeka.....	December 31.....	Building \$60,000 steel viaduct at Branner St., for Topeka St. Ry. Co., etc.....	A. M. Patten, Gen. Supt.
Arkansas.....	Madison.....	January 2, noon.....	Bldg. 700-ft. steel highway bridge over St. Francis Co.....	H. N. Pharr, Memphis, Tenn., C. E.
Louisiana.....	New Orleans.....	January 2, 1 P.M.....	Erecting Bascule Trunion bridge over Bayou St. John.....	Charles R. Kennedy, Comptroller.
Oregon.....	Grant's Pass.....	January 2, 2 P.M.....	Erecting steel bridge 400 ft. long 22 ft. wide over Rogue River.....	Josephine County Court.
Iowa.....	Tipton.....	January 3, noon.....	Building and repairing all Co. bridges during 1908; also for steel bridges, bridge piling and lumber during year.....	P. H. Schneider, County Auditor.
Ohio.....	Cincinnati.....	January 3, noon.....	Constructing reinforced concrete culvert, Sycamore twp.....	Board of County Commissioners.
Ohio.....	West Union.....	January 3.....	Bldg. superstructure bridges over two creeks.....	Auditor, Adams County.
Kansas.....	Topeka.....	January 3.....	Constructing Cross Creek bridge.....	City Clerk.
Missouri.....	Memphis.....	January 3.....	Erecting 44-ft. span, 12-ft. approach, Croley bridge, Vest twp.....	Scotland County Com'rs.
Indiana.....	Hammond.....	January 6, noon.....	Furn. and bldg. sub and superstructure, etc., swing bridge.....	Bd. Co. Com'rs, Crown Point.
Virginia.....	Fort Monroe.....	January 6, noon.....	Reconstruction of Mill Creek bridge.....	Ernest R. Tilton, Q. M., U. S. A.
Louisiana.....	Colfax.....	January 6.....	Constructing 2 steel bridges over Big Creek and Fish Creek.....	J. B. Roberts, Clk. Police Jury.
Alabama.....	Attalla.....	January 6.....	Bldg. steel bridge to replace Rhea bridge; cost \$5,000 to \$10,000.....	Etowah Co. Com'rs, Gadsden.
Mississippi.....	Gulfport.....	January 6.....	Plans and specifications for erecting draw-bridge.....	F. S. Hewes, Clk., Bd. Superv.
North Carolina.....	Castle Haynes.....	January 7, 3 P.M.....	Constructing steel bridge, 400 ft., inc. draw span and foundations, 16 ft. roadway, carry 15-ton road roller; water 32 feet deep.....	D. McEachern, Wilmington.
South Dakota.....	Salem.....	January 7.....	Building all bridges in McCook County during coming year.....	C. J. Black, Co. Auditor.
Iowa.....	Creston.....	January 7.....	Furn. material and bldg. all Co. bridges during year.....	W. F. Craig, County Auditor.
South Dakota.....	Brookings.....	January 8, noon.....	Furn. material and labor for bldg. all Co. bridges in 1908.....	P. J. Murphy, County Auditor.
Florida.....	Ocala.....	January 8.....	Bldg. steel bridges at Stokes Ferry; also near Dunellon.....	S. T. Sistrunk, County Clerk.
Missouri.....	Bethany.....	January 8.....	Constructing several steel bridges in the County.....	J. C. Howe, Bridge Commissioner.
Minnesota.....	Waseca.....	January 8.....	Constructing seven steel bridges.....	C. H. Bailer, County Auditor.
South Dakota.....	Redfield.....	January 10, noon.....	Labor and material for bldg. all Co. bridges during 1908.....	W. J. Bingham, County Auditor.
Nebraska.....	Wayne.....	January 10.....	Building and repairing all bridges for County in 1908.....	County Clerk.
Idaho.....	Marsh (Sw't P.O.).....	January 13.....	Repairing south pier, Marsh and Ireton bridge.....	County Clerk.
Nebraska.....	Geneva.....	January 14.....	Furn. material and erecting all Co. bridges bent and pile, steel and wooden, required during year com. January 14, 1908.....	W. C. Peterson, Clk. Bd. Co. Supevr.
Nebraska.....	Fremont.....	January 15.....	Furn. material and bldg. all bridges for County during 1908.....	C. O. Boe, County Clerk.
Pennsylvania.....	Washington.....	January 17, noon.....	Bridges, culverts, etc., three miles of Dry Run road.....	Wm. Wylie County Engineer.
New York.....	Le Roy.....	February 1.....	Plans, etc., for bridge over Oatka river, will pay \$250.....	Philo J. Sperry.
Missouri.....	St. Charles.....	February 13.....	Erecting Cuivre River bridge at Old Monroe; cost, \$8,000.....	County Commissioners.

Lighting and Electricity

Washington....	Tulalip.....	December 27, 2 P.M.	Constructing electric lighting system at Indian School.	Dr. Chas. M. Buchanan, Supt.
Illinois.....	Chicago.....	December 28, 11 A.M.	Installing switchboard and all equipment, H. N. May Sta.	Wm. Carroll, City Electrician.
Illinois.....	Chicago.....	December 28, 11 A.M.	Electrical work, etc., for new Isolation hospital.	John J. Hanberg, Com'r Pub. Wks.
Illinois.....	Chicago.....	December 30, noon.	Furn. and installing air-cooled transformers and a. c. meters.	I. J. Bryan, Clk., Sanitary Dist.
Ohio.....	Dayton.....	December 30, noon.	Furnishing and installing, complete, underground conduit and cable system, etc., police and fire departments.	Chas. F. Hall, Pres. Bd. Pub. Safety.
Virginia.....	Richmond.....	December 30, 4 P.M.	Furn. 6, 10, 12 and 20-in. gas mains and installing in streets.	W. P. Knowles, Supt. Gas Works.
Ohio.....	Columbus.....	December 30.....	Cable and wire for 1,000 k. w. generator and motor.	E. F. McGuire, Sec'y Bd. Pub. Serv.
California.....	Monterey.....	December 30.....	Furn. and installing electric light fixtures, officers' quarters.	John L. Clem, Q. M., Presidio.
India.....	Calcutta.....	December 31.....	Lighting town by electricity, gas, oil or other method; now lighted by 9,300 gas lamps of 24 c.p. and 2,400 c.p. oil lamps.	
New Jersey.....	Trenton.....	December 31.....	Furn. electric current for light and power in and about State House, for 3 or 5 years; max. current, 1,500 amperes, 110 volts a. c. 60 cycle, single phase for lighting, etc., for elevators, motor shops, etc., 200 amperes, 220 volts, etc.; bids on flat meter rate.	Municipal Council.
West Virginia.....	Charleston.....	January 1.....	Lighting streets for one year from February 1.	J. W. Morgan, State Comptroller.
New Jersey.....	Jersey City.....	January 2, 12:15 P.M.	Furn. 2,000 arc-light globes, wire and other supplies.	Chas. A. Johnson, City Clerk.
Dist. of Col'bia.....	Washington.....	January 6, 10:30 A.M.	Furn. engine and generator, switchboard, 1st. Canal Com'n.	John C. Sweeney, Clk. Blvd. Com'rs.
Ohio.....	Newburgh Hts.....	January 7, 8 P.M.	Furnishing material and supplying village with street lighting; bids as whole or on labor and material.	H. F. Hodges, Gen. Purch. Agent.
Dist. of Col'bia.....	Washington.....	January 15, noon	Equipment for light, heat and power plant for U. S. Capitol, etc.	P. S. Ruggles, Village Clerk.
Nebraska.....	Wood River.....	January 15.....	Constructing \$17,000 electric light and water works plant.	Elliott Woods, Superintendent.
Pennsylvania.....	Donora.....	January 15.....	Constructing overhead line from Donora to Eldora.	D. D. O. Kane, Village Clerk.
Louisiana.....	Lecompte.....	February 1.....	Constructing electric light plant, to cost about \$10,000.	B. M. Hanna, Pres. St. Ry. Co.
				Baldwin Wood, New Orleans, Eng'r

Miscellaneous

Maryland.....	Annapolis.....	December 26, 10 A.M.	Furnishing a quantity of tile, Schedule 604.	Bureau of Supplies & Accounts, Navy Dept., Washington, D. C.
New York.....	New York.....	December 27, 3 P.M.	Installing vacuum cleaning system for U. S. Custom House.	James Knox Taylor, Wash., D. C.
Indiana.....	Indianapolis.....	December 27.....	Collection, removal and disposal of ashes and sweepings for 10 years; also for sweepings for same period.	Jos. T. Elliott, Pres. B. P. W.
Ohio.....	Dayton.....	December 30.....	Furn. and installing complete underground conduit and cable system, etc., for Police and Fire Depts.	C. N. Greer, Clk. Bd. Pub. Service.
Pennsylvania.....	Altoona.....	December 31.....	Collection and sanitary disposal of garbage, 1, 3, 5 or 10 years.	Sam'l B. Trees, Sec'y Bd. Health.
New Jersey.....	Jersey City.....	January 2, 12:15 P.M.	Furnishing 2,500 assorted trees; 50,000 copper-coated carbons, 250 chestnut poles and other supplies.	John C. Sweeney, Chm. Blvd. Com'rs.
Dist. of Col'bia.....	Washington.....	January 6, 10:30 A.M.	Furn. brick, etc., Isthmian Canal Commission.	H. F. Hodges, Gen. Purch. Agent.
Massachusetts.....	Boston.....	January 6, 2:30 P.M.	Bldg. Sec. 6 Boston Marg. Cond. and Sec. 4 of Embankment, inc. 18,000 cu. yds. earth fill; 20,000 lin. ft. piles, 3,000 cu. yds. concrete masonry; 240 cu. yds. stone masonry; 400 tons riprap; removal 600 cu. yds. masonry; bldg. 3 coffer dams and gate-chamber.	
Pennsylvania.....	Reading.....	January 7, 7 P.M.	Collection and disposal of garbage, 1, 2, 3, 4, 5 years.	Hiram A. Miller, Ch. Engr. Charles River Basin Com'n, 367 Boylston Street.
New Jersey.....	Irvington.....	January 7, 8 P.M.	Furnishing combination hose wagon.	Elmer H. Beard, City Engineer.
Tennessee.....	Chattanooga.....	January 7.....	Screen wagon service between P.O. and depts. 4 years, rural delivery.	M. Stockman, Town Clerk.
Iowa.....	Creston.....	January 7.....	Furn. all steel pipe and cement work in Co. during year.	W. Scott Raulston, Postmaster.
Arizona.....	Ft. Huachuca.....	January 9, 11 A.M.	Constructing a swimming pool.	W. F. Craig, County Auditor.
Minnesota.....	Jackson.....	January 9, 11 A.M.	Steel and wood furniture for new Co. Court House.	C. A. H. McCauley, Ch. Q. M., Denver, Col.
Indiana.....	Indianapolis.....	January 10.....	Making and placing Indiana monuments on Vicksburg field.	H. G. Anderson, Chm. Co. Bd.
North Carolina.....	Wilmington.....	January 10.....	Two 6-pocket bottom-dump scows.	H. C. Adams, Chm. Mon. mt. Com'n.
Ohio.....	Columbus.....	January 14, noon	Design, construction, delivery and erection of garbage reduction works, capacity 100 tons per 24 hours.	Capt. E. I. Brown, Eng. Corps.
Michigan.....	Grand Rapids.....	January 15, 3 P.M.	Furn. stone for pier filling and riprap, various harbors.	Henry Maetzel, Ch. Engr. D. P. S.
California.....	Santa Monica.....	January 15.....	Constructing new pier, inc. new outfall sewer pipe; cost, \$100,000.	Maj. Chas. Keller, U. S. Engineers.
New York.....	Brooklyn.....	January 18.....	Bldg. new drydock, 15 per cent. completed; cost, \$757,800.	Thos. H. James, City Engineer.
Pennsylvania.....	Erie.....	February 4, 3 P.M.	Constructing public steamboat landing 500 ft. long, 100 ft. wide, including dredging, timber, cribs filled with rock, filling between cribs, concrete walls and brick pavement.	Wm. M. Smith, Chief Clerk, Bureau Yards and Docks, Navy Dept., Washington, D. C.
Missouri.....	St. Louis.....	February 11, noon	Furn. tools, labor, machinery and buildings for reduction of garbage for a term ending Sept. 1, 1918.	H. T. Leasure, Sec'y Erie Dock Com.
South America.....	Buenos Ayres.....	May 1, 2 P.M.	Bldg 2 underground electric railways, etc.	W. B. Dryden, Sec'y Bd. Pub. Imp. Argentine Legation, Wash., D. C.

STREET IMPROVEMENTS

Washington, D. C.—Bids are asked, December 26, by the Commissioners of the District of Columbia for 6x20-inch granite curbing during the remainder of the year ending June 30.

Albany, Ga.—Bids will be received, January 6, for the purchase of \$75,000 5 per cent. public improvement bonds.—Y. C. Rust, City Clerk.

Macon, Ga.—Council has directed the Atlantic Compress Company to begin within ten days the construction of underpass beneath railroad track on Poplar street; it is provided that a bridge of steel construction, twenty-four feet in length, be built.

Bloomington, Ill.—The Board of Local Improvements has directed estimates to be prepared for paving Clay street.

Chicago, Ill.—Ordinances have been passed for improving certain streets; the work includes: Wentworth avenue, between Root street and Garfield boulevard, granite blocks, \$191,000; Maxwell street, between Canal and Morgan streets, asphalt, \$48,500; Lock street, between Archer avenue and Thirty-first street, asphalt, \$11,500; Greenwood avenue, from Sixtieth to Sixty-fifth street, asphalt, \$32,500; Lexington avenue, from Sixty-first to Sixty-fifth street, asphalt, \$30,500; Woodlawn avenue, from Sixtieth to Sixty-seventh street, asphalt, \$54,000; a paving system for a section of Ravenswood at a cost of more than \$200,000 has also been approved.

Danville, Ind.—The Commissioners of Hendricks county will receive bids, January 6, for the improvement of the highway on the boundary line between Center and Middle townships, by grading, draining and macadamizing with broken stone, 14,598 feet in length.—D. D. Mills, County Auditor.

Cumberland, Md.—The Allegheny County Board has under consideration a proposition to issue \$150,000 road bonds.—Address County Auditor.

Fort Washington, Md.—Bids are asked by the Constructing Quartermaster, Fort Washington, for resurfacing macadam roads.

Hagerstown, Md.—Citizens have appeared before the Mayor and Council to ask that Potomac street, from Locust Point to the City Limits, be paved with such material as the city may direct.

Lowell, Mass.—City Engineer George Bowers is busily engaged in preparing estimates of the cost of abolishing the grade crossings at Lincoln and Plain streets. Representatives of the railroad are also at work figuring on the cost; at the next meeting before the Railroad Commissioners, at the State House in Boston, on January 2, both the railroad and the City Engineer will submit their figures. Mr. Bowers is estimating on a 5 per cent. grade. Supt. Morse has started the difficult task of grading and straightening Crawford street, in Pawtucketville, which was recently accepted. The street is very hilly, and will be a hard job; a portion of Lawrence street, which became a part of Lowell under the last annexation, is being straightened; he is doing a great deal of work on the streets and sidewalks throughout the city, filling in with cinders.

Cambria, N. Y.—Bids will be asked by the Supervisors of Niagara County for the construction of the Shawnee-Cambria wall, at an estimated cost of \$28,500.

Freeport (L. I.), N. Y.—The Board of Trustees has decided to improve certain streets by paving with brick; estimated cost, \$54,000.

New York, N. Y.—Bids will be asked by the Department of Water Supply and Electricity, December 30, for furnishing materials, repairing and restoring artificial stone sidewalks and curbing and resetting natural stone curbing.

Olean, N. Y.—The building of a State road from Olean to Portville, at a cost of \$65,000, has been authorized.

Patchogue, L. I., N. Y.—Bids will soon be asked by the Village Trustees for building the shore road, along the bay front, between Cedar and Rider avenues.

Cincinnati, O.—Halstead street, from the south line of Dixon street to the north line of Addison street, will be paved with

macadam; Warsaw avenue will be improved by the construction of a retaining wall on the east side; declaratory resolutions have been passed for the improvement of Chateau avenue with boulders; Wendel alley, from Mulberry to Evans, with brick; Columbia avenue, to the corporation line, with brick.

Columbus, O.—John T. Barr, City Clerk, states that Kidmore street is to be paved with asphalt, hard burned brick or block, bids for which are soon to be invited.

Bids will be received, December 28, for the purchase of \$4,600 5 per cent. street improvement bonds.—R. G. Hutchins, Road Commissioner of the North High Street Road Improvement.

Conneaut, O.—F. T. Coughlan, of the Board of Commissioners, has made an inspection of the system of brick pavement, laying and assessment in Cuyahoga County, with a view of arranging for a large amount of paving which the East Side residents have petitioned for between the viaduct and the State line; City Engineer Matson will now prepare the plans.

East Liverpool, O.—City Engineer will prepare plans and specifications for paving Seventeenth street.

Elyria, O.—Frank R. Fauver, Secretary, Road Commissioners, will open bids, January 14, for bonds aggregating \$100,000, bearing interest at 5 per cent., payable semi-annually, for road improvements.

Hamilton, O.—Plans are to be immediately prepared for paving Market street, from Monument avenue to Fourth street.

Lorain, O.—The Trustees of Black River Township are securing consents of property owners for a macadamized road to be built from the Penfield avenue junction to Amherst; R. C. Hagerman, County Commissioner, states that the road will be the finest in the county.

Mansfield, O.—The city is arranging for the grading, paving and curbing of Bowman street; the improvement to be made early in the spring.

Port Clinton, O.—Chas. E. DeWitt has been appointed Engineer for the paving of

Fourth street, and will prepare the plans at once; the improvement is to be made early in the spring.

Ravenna, O.—Messrs. Bigelow, Robinson and Bently have been appointed a special committee to take up the matter of the paving of such streets in the town as should be improved in the spring, following the completion of the extensive sewer work which is just being finished.

Youngstown, O.—E. G. Miller is Chairman of the special committee to look into the matter of paving Federal street; various kinds of paving material are to be investigated.

Oklahoma City, Okla.—City Engineer Miller is busy preparing plans and profile maps for the Noble avenue pavement, the new sewer, and the two new bridges to be submitted to Council.

Bellevue, Pa.—Bellevue Council has passed an ordinance providing for a vote on a bond issue of \$100,000 for street, sewer and paving improvements and better fire service.

Harrisburg, Pa.—Ordinances were read in Common Council authorizing the paving of Kittating street, from Crescent to Deny, with sheet asphalt and granite curbing; Swatara street, from Crescent to Seventeenth; and Berry Hill street, from Cameron to Thirteenth. An ordinance has been presented in the Select Council authorizing the paving of Crescent street, from Mulberry to Berry Hill, with sheet asphalt on concrete, and providing for granite curbing.

Philadelphia, Pa.—Mayor Reyburn, Council and Pennsylvania Railway officials have reached an agreement to draw up plans for eliminating grade crossings in the southern section of the city; a rough estimate places the cost of the work at \$4,500,000.

Rochester, Pa.—An election will be held to vote on the question of issuing \$100,000 road improvement bonds.—Address Clerk of the Board.

Memphis, Tenn.—The City Engineer has been directed to make an estimate of the cost of paving a section of Myrtle avenue.

Memphis, Tenn.—The petition of the residents to pave Madison avenue, between Somerville and Euphon place, was granted, and the work ordered done.

Dallas, Tex.—The form of the contract for the paving of Ross avenue has been drawn up and examined by Street Commissioner Doran, and contracts for the laying of storm and sanitary sewers on Main street are also being prepared, and it is intended to have these ready for the next meeting of the Commission.

Palestine, Tex.—The Attorney General has approved an issue of \$50,000 paving bonds.—J. R. Hearne, Mayor.

Norfolk, Va.—An estimate of the cost of curbing and paving with asphalt that portion of Annistead Bridge road, between Blow street and Colley avenue, amounting to \$1,080, has been submitted to the Finance Committee of Council.

Seattle, Wash.—City Engineer R. H. Thomson has filed estimates with the Board of Public Works for concrete walks on East Prospect street and East Park drive, \$14,900; plank roadway on West Stacy street, \$1,300; brick paving in alley of block bounded by Madison and Spring streets and Third and Fourth avenues, \$3,000.

Seattle, Wash.—Ordinances have been passed ordering the following street improvements: Graham avenue, grading, estimated cost \$27,000; alley in Block 2, University Addn., grading, \$650; alleys in Blocks 14, et al., Maynard's Plat, paving, \$7,000; Davis place, et al., grading, \$30,200; Main street, brick paving, \$4,100. The estimated cost has been reported on property owners' majority petition for the improvement of Thorn-dyke avenue, et al., for grading, constructing concrete sidewalks, sewers and water mains, as \$124,000.—R. H. Thomson, City Engineer.

Racine, Wis.—The Board of Public Works will receive bids, December 28, for grading and paving Fifth street, from Main street to Lake avenue.—P. H. Connolly, Chairman.

Ottawa, Ont.—The Iroquois Iron Works has been awarded the contract for furnishing a municipal asphalt plant, for \$14,800.

SEWERAGE

East Lake, Ala.—Bonds, \$40,000, have been voted for sewer purposes.

Elmhurst, Cal.—Property owners have prepared a petition to be sent the Board of Supervisors requesting an opportunity to vote on the establishment of a sanitary district; the sum of \$75,000 is needed.

Sacramento, Cal.—The city has voted \$200,000 for bonds to complete the sewer system.—George Randall, City Engineer.

Albany, Ga.—A special election will be held to vote on the question of issuing \$25,000 sewer extension bonds.

Athens, Ga.—Election is to be held, January 15, to vote on issuing \$25,000 of bonds for sewers.

Madison, Ga.—Bids will be received, December 31, for the purchase of \$50,000 30-year, 4½ per cent. water, light and sewer bonds.—E. W. Butler, Mayor.

Galva, Ill.—The Board of Local Improvements has directed plans for the construction of sewers; cost, \$30,000.

Moline, Ill.—Clark G. Anderson, City Engineer, is preparing plans for a sewer system in the Sixth Ward, to cost about \$100,000.

Silvis, Ill.—Estimates are being prepared for a sewer system.

Wilmette, Ill.—Plans have been prepared for the construction of a sewer system, to cost \$150,000.—John D. Couffer, President.

Creston, Ia.—City is to secure Engineer to advise means of disposing of sewage from a manufacturing plant.

Des Moines, Ia.—George Dobson, City Engineer, has submitted to Council a plan for combining all city sewers into a large trunk sewer with an outlet into the Des Moines river, two miles south of the forks of the Raccoon and Des Moines rivers; estimated cost, about \$75,000.

Logansport, Ind.—Plans for storm water sewer on Sycamore street have been completed.—John Schmidt, City Engineer.

Muncie, Ind.—Trustees of Riverside City (a suburb of this place) propose the construction of two additional sewers.

Fredonia, Kan.—Plans are being prepared for the construction of a sewer system, to cost \$40,000.—R. S. Spencer, City Clerk.

Iola, Kan.—Improvement of city sewer system is under consideration.

Lawrence, Kan.—Ordinances are before City Council for construction of two main sewers, one in north part and the other in southeast part of town.

Winfield, Kan.—Property owners of West Side are considering formation of a sewer district in order to secure lateral sewer for that section; Grant Stafford is interested.

Long Beach, Miss.—Council has under consideration an issue of \$10,000 paving bonds.—Address City Clerk.

Webb City, Mo.—An ordinance providing for the proposed new outfall sewers, to be known as the Madison street, Central avenue and Ash street sewers, Nos. 1 and 2, has been passed by the Council. The ordinance provides for the cost and line of route of each sewer; another ordinance provided for a special election to vote bonds for sewer construction, and was also passed; it sets the date of election for January 7, and provides for the issuance of bonds to the amount of \$17,000.

Orange, N. J.—An ordinance has been passed to curb and recurb, pave and repave, and reflag Essex avenue, from White street to Park avenue; vitrified brick or Belgian blocks will be used.

Indianapolis, Ind.—Plans are being prepared for a sewer in Spring street, from Ohio to Walnut street, with laterals running east in the alley.

Caney, Kan.—Bids will be received, January 7, for the purchase of \$30,000 6 per cent., 10-year sewer bonds; also \$20,000 5 per cent., 30-year sewer bonds.—M. E. McMillan, City Clerk.

Detroit, Mich.—The Board of Public Works has been authorized to advertise for bids for constructing lateral sewers in several alleys. The Board of Health, John F. McKinlay, Secretary, has recommended that the sewer in the south side of Monroe avenue, west of Farmer street, be condemned, as the sewage backs up into cellars, and that it be lowered and reconstructed; estimates have been prepared for a number of sewers in the Eighteenth Ward.—J. J. Haarer, Commissioner.

Albuquerque, N. Mex.—Plans have been prepared for the reconstruction of the sewerage system, at a cost of about \$400,000.—James L. Gadding, City Engineer.

Buffalo, N. Y.—The Department of Public Works is preparing to construct a 20-inch sewer in Fulton street.—F. G. Ward, Commissioner.

Niagara Falls, N. Y.—The City Engineer has prepared plans for a tunnel trunk sewer, for the factory district; estimated cost of work, \$67,000.

Mount Kisco, N. Y.—The village has voted to build sewers, to cost \$100,000, of which \$60,000 will be for the trunk sewer. The city of New York will build a disposal plant costing \$250,000, in connection with this system.

Seneca Falls, N. Y.—Council is arranging to extend sewer system; estimated cost, \$68,000.

Syracuse, N. Y.—Bids will be called for in the spring for the proposed intercepting sewers, to cost about \$500,000.—Glenn D. Holmes, of Syracuse, Chief Engineer of Intercepting Sewer Board; Henry C. Allen, City Engineer.

Canton, O.—Armstrong Ashbrook, City Auditor, will open bids, January 6, for the purchase of \$10,000 bonds for constructing storm water sewers.

Cincinnati, O.—Plans for a sanitary sewer

on Herschell avenue have been ordered prepared; also on Wehman avenue, Fredonia avenue, Grand avenue, from Glenway to Lehman road.

Conneaut, O.—Council is taking up the matter of a very important improvement to the storm sewer system; it is proposed to rebuild the sewer system as it runs on West Main, Chestnut and Mills streets, necessitating rebuilding and enlarging the sewers on other streets; these improvements, with a large amount of paving, are to be arranged for.

Ironton, O.—The town of Kenova has under consideration the project of bonding the town in the sum of \$30,000 for the construction of sewers.

Lockland, O.—Council of the village has held conferences with Riggs & Sherman, of Toledo, and John W. Hill, relative to the completion of the sewer system; no definite plan of improvement has yet been adopted.

Mansfield, O.—The Board of Public Service has authorized the Engineer to have plans for half a dozen sewers immediately prepared, so that the work of construction can be commenced early in the spring; cost, \$7,000.

Orrville, O.—The Engineer's survey makes the new sewerage system fourteen miles long; his estimate is \$54,000; the bids now in range from \$30,000 to \$70,000.

Springfield, O.—Council has decided to proceed with the construction of sewers on a dozen specified streets, and the money has been appropriated for the improvements.

Steubenville, O.—The Board of Public Service has recommended that the sewer in Adams street be extended from Ninth street to Pleasant Heights; a number of other sewer improvements have been authorized by Council.

Zanesville, O.—The Board of Public Service has authorized the employment of an Engineer to draft plans for the completion of the sewer system in Putnam sewer district No. 2.

Alliquippa, Pa.—The State Health Department has granted the Borough a permit to construct a sewer.

Beaver, Pa.—Civil Engineer James P. Leaf, of Rochester, N. Y., has presented a rough sketch of the proposed sewer system; this system contemplates two large receiving sewers, one at each end of Beaver; on Buffalo street he suggested that from the river to Third street a 15-inch sewer be constructed, and from there to Fifth street a 12-inch sewer would do. At the east end of town he suggested that a 12-inch sewer be laid from the river to the foot of Beaver street, from there along First street to Wilson avenue, thence to East Second street, and from East Second street along East End avenue. The intercepting sewers would be made of 8-inch pipe, and along the business portions of Third street he recommended a sewer to be placed under the sidewalks on each side of the street. Mr. Leaf is of the opinion that for some time to come the State Board of Health will not insist upon the construction of a sewage disposal plant, but would allow the sewers to empty into the Ohio river; he has been instructed to present a detailed estimate for the system as recommended by him.

Bryn Mawr, Pa.—Bryn Mawr College has been directed to connect its sewer with the sewer system of Lower Merion Township.

Chester, Pa.—An ordinance has been passed for constructing a sewer in Edgemont.

Lancaster, Pa.—A permit has been granted by the State Health Department to construct sewers on condition that a dam be erected.

New Cumberland, Pa.—Plans are being prepared for the construction of a new sewer system, to cost \$30,000.

Reading, Pa.—A Council Committee is visiting a number of Ohio and Kentucky towns preparing to establish a municipal garbage plant.—J. H. Close, Chairman of Committee.

Scalp Level, Pa.—The State Board of Health, to which was referred the Scalp Level sewer ordinance, has turned down the proposition by the refusal to grant a permit for its construction according to the plans arranged by the Borough Engineer and adopted by the Council. Instead, Dr. Dixon, Commissioner of Health and the head of the State Board, has sent to the Scalp Level Council a permit for the construction of a sewer of the 6-inch kind. The Councilmen say they will not allow one cent of the borough's money to be used in such an investment. The ordinance as framed by the Solicitor of the Borough, Attorney J. Wallace Paul, of Johnstown, based on the report of the Borough Engineer, provides for a big sewer that will fill the wants of property owners of Scalp Level for a long time to come, while a 6-inch system, it is claimed, would be little better than a nuisance, even though the population of the borough does not increase within the next fifty years.

Knoxville, Tenn.—Bids will be received for the construction of sewers; estimated cost, \$14,000.

Seattle, Wash.—Ordinance has passed for the construction of sewers in Fuhrman avenue, et al., to cost \$26,800; in West Sixty-second street for \$910, and for sewers, water mains, grading, etc., Thorndyke avenue, et al., to cost \$124,000.—R. H. Thomson, City Engineer.

Spokane, Wash.—City Commissioner John T. O'Brien announces that work on the extensions of the sewer system in Spokane involving an expenditure of \$162,904, will begin early next March; contracts have been awarded for this work to Allan F. Gill, John Fife, James C. Broad, Julia V. Costello and J. L. Wood; the biggest piece of sewer work in the history of the city was completed this year in the Third Ward. The work was done by the Independent Asphalt Company, at a cost of \$74,000.

Revelstoke, B. C.—The city is arranging to establish sewer system.

Welland, Ont., Can.—The ratepayers will vote at the January elections to issue \$13,000 5 per cent. 30-year debentures to pay the city's share of a trunk sewer from Lincoln street to the Welland river.—Henry W. Boyd is Clerk.

Toronto, Ont., Can.—C. H. Rust, City Engineer, and the Medical Health Officer of this city have reached an agreement on a suitable sewage disposal system for this city, which will be situated at the foot of Greenwood avenue and will cost \$2,500,000 to install, with an additional \$800,000 for bacteria beds, if such are found necessary. This proposal will be put before the Council soon.

Pembroke, Ont., Can.—It is stated that septic tanks will be installed in connection with the sewerage system of the military camp at Petawawa, in charge of the Public Works Department. Dr. R. W. Bell is Provincial Medical Inspector.

WATER SUPPLY

San Francisco, Cal.—Plans for an auxiliary water system for fighting fires were introduced to the Public Utilities Commission by Thomas P. Woodward, City Engineer, who said they covered 4,000 acres in a district bounded by Divisadero street, the bay, Channel street, Treat avenue and Twentieth street, with a zone for the Potrero and part of North Beach. Estimated cost, \$5,250,000. The system comprises two reservoirs on Twin Peaks, one at Seventeenth and Stanyan streets, one at Jones and Clay streets, two salt water pumping stations for emergency use, two fireboats, an underground pipe system with cisterns. Fresh water would be got from wells at Seventh and Harrison streets, and at Sixteenth and Shotwell streets, and pumped to the high pressure stations. About 100 cisterns are provided.

Tropico, Cal.—The Tropico Water Company has decided to purchase the water plant now owned by the Dwight Briswood Land Company; \$25,000 in bonds will be issued to pay for the pumping plant and for making improvements.

Vallejo, Cal.—An election may be held to vote on issuing \$60,000 bonds for increasing the city water supply.

Dolores, Col.—The Town Council has ordered a survey and estimate to be made for a municipal water supply system and electric lighting plant. The work is now under progress and when completed will be submitted to the taxpayers to authorize an issue of bonds to cover the cost of the system. It will involve an expenditure of about \$40,000.—W. F. Ordway, Mayor; J. H. Eby, Engineer.

Atlanta, Ga.—The city will purchase small mains with the \$60,000 remaining from the recent bond issue.

Barnesville, Ga.—An election will be held December 31, to vote on the question of issuing bonds for improving water system.

Blue Ridge, Ga.—Bonds, \$30,000, have been voted for water supply.

Dublin, Ga.—A \$40,000 bond issue is to be voted on January 8; part will be used for enlarging water works and extending sewer.

Madison, Ga.—Bids will be received, December 31, for the purchase of \$50,000 4½ per cent. water bonds.—E. W. Butler, Mayor.

Rockton, Ill.—A waterworks system, costing about \$17,000, may be installed within a short time provided satisfactory arrangements can be concluded for financing the project.

Berwyn, Ill.—The city of Chicago is to extend its water mains to limits of this place to supply water.

Mentone, Ind.—Town Board is seeking to have water works installed.

Cottonwood, Ida.—The Cottonwood Water and Light Company has secured franchise to establish a water system.

Rockford, Ill.—The Water Works Committee is planning to expend \$50,000 in extending water mains.

Ft. Leavenworth, Kan.—Bids will be received for the construction of water mains, according to plans and specifications.—Capt. J. E. Normoyle, Quartermaster.

Harrodsburg, Ky.—The city has bought the water works plant, which was owned by the Mercer Water Company and composed chiefly of Lexington citizens, for \$36,000; the plant has been turned over to the city free of incumbrance.

Blandford, Mass.—A water works and sewage system will be built next year.

Baltimore, Md.—The city is endeavoring to obtain permission to issue \$5,000,000 bonds for increasing its water supply.—Alfred Quick, Engineer of Water Works.

Cadillac, Mich.—The directors of the Cadillac Water and Light Company have decided to extend and improve plant.—W. H. Anderson, President.

Marquette, Mich.—Council will engage an expert engineer to pass upon the question of a water supply for the town; H. W. Nebel has estimated the improvement at \$159,000.

Duluth, Minn.—The Board of Public Works proposes to extend the water system and purchase additional water meters.

Speeds Addition (Vicksburg post-office), Miss.—The citizens of the village have voted \$20,000 bonds for constructing a municipal water system.—J. W. Hayes, Vicksburg, Mayor.

Malmo, Neb.—The Village Board has appointed a committee to investigate the cost of installing a water works system and electric light plant.

Vicksburg, Miss.—The citizens have voted to issue water bonds.

Jersey City, N. J.—Chief Engineer Van Keuren of the Street and Water Commissioners has been directed to draw up plans for two 36-inch water mains under the Hackensack and Passaic rivers; estimated cost, \$100,000.

Albany, N. Y.—Bids for \$100,000 4 per cent. water supply bonds were oversubscribed at par and interest.

Burlington, N. C.—Bonds, \$100,000, have been voted for the construction of a water and sewer system.

Cincinnati, O.—The Executive Committee of the Lower River Road Association at Home City have asked for an extension of the Cincinnati Water Works service to that village, and will pay for the cost of construction.

Delta, O.—The people will vote in December on the proposition to issue bonds in the sum of \$25,000 for the purpose of erecting a water works plant.

Fostoria, O.—Engineers Riggs and Sherman, of Toledo, have made a preliminary report on the matter of a filtration plant; Council will probably take up the matter definitely of the construction of such a plant.

Garrettsville, O.—L. B. Snow, Village Clerk, will open bids, January 3, for the purchase of bonds aggregating \$2,000, at 4 per cent. interest, payable semi-annually, the proceeds to be for constructing a water works.

Harrisburg, Pa.—The State Water Supply Commission has approved the charter application for four new water companies, including the Progress Water Company, of Susquehanna township. The other companies are located in Centre, Beaver, and Lawrence counties. The application of the Penn's Creek Water and Water Power Company, which designed to build large dams and furnish water power to Hartley township, Union county, has been held up.

Parkersburg, W. Va.—By an agreement reached between the Water Works Commission and the Board of Affairs, it is understood Chapin and Knowles, the Pittsburg Engineers, who have been the choice of the Commission to make the preliminary investigation for the proposed water works, are now acceptable to the Board of Affairs, and that G. L. McKibben, the Van Wert Engineer, with whom an alleged contract existed with the Board of Affairs, will be dropped but will be given a reasonable compensation for what services he may have rendered; any compensation to Mr. McKibben will have to be passed upon by Council.

Warren, Pa.—Citizens will vote on the question of purchasing the mains and franchises of the Warren Water Company.

Charleston, S. C.—By a vote of 1,082 to 228, the citizens favored the confirmation of the grant of a thirty-year water contract to the Charleston Light and Water Company.

Columbia, S. C.—The Water Works Commission wishes an increase in appropriation for the coming year, asking a minimum appropriation of \$60,000 for an increase in salaries, building warehouse and extension of water mains. The itemized estimate of the Commission's needs amounts to \$53,484. This does not include the warehouse and Superintendent's salary.

Childress, Tex.—The citizens have voted \$15,000 bonds for water supply.

Corpus Christi, Tex.—Council proposes to purchase the water works plant now owned by a private company.

Dallas, Tex.—The Water Department is preparing to extend the water mains in several districts.

Norfolk, Va.—Mayor J. G. Riddick has signed the ordinance appropriating \$50,000 for water meters and over 3,000 will be bought; the Board of Control will endeavor to select the best rather than the cheapest.

Burlington, Vt.—A 4,000,000-gallon pump and additional boiler capacity at the main or lake station and a 2,000,000-gallon pump, preferably motor-driven, at high service, are recommended by the Fire Prevention Committee of the National Board of Underwriters, 135 William street, New York, N. Y.

Madison, Wis.—Council has decided to issue \$25,000 in bonds for improving water supply.

Seattle, Wash.—Ordinance has passed for constructing water mains in Valley street, at cost of \$2,225; also for water mains, sewers, grading, etc., Thorndyke avenue, et al., to cost \$124,000.—R. H. Thomson, City Engineer.

Marinette, Wis.—The Marinette Water Company is planning for extension of water system next spring.

Tacoma, Wash.—Resolutions have been adopted by Council providing for the improvement of a number of streets in Local Improvement District No. 527 by the construction of water mains together with other necessary fixtures; the cost of the improvement will be about \$10,955.—L. H. Pearson, City Clerk.

Cheyenne, Wyo.—Council has passed an ordinance providing for issue of \$160,000 bonds for additional water works; an additional reservoir may be constructed west of the city and larger water mains may be laid.

Berlin, Ont., Can.—Application has been made to the Ontario Railway and Municipal Board to sanction the issue of \$6,000 debentures for the extension of water works.

Carleton Place, Ont., Can.—A proposed by-law to raise \$200,000 for the installation of sewerage and water works system is being considered by Council.

Chelsea, Ont., Can.—The Town Council will submit a by-law to the ratepayers authorizing the raising of \$38,000 for the installation of water works.

Gravenhurst, Ont., Can.—Application has been made to the Ontario Railway and Municipal Board for the confirmation of the issue of \$15,000 debentures for water works extension.

Hamilton, Ont., Can.—T. W. Sotham, Chief Engineer, Hydro-Electric Power Commission, has completed specifications for the two new 6,000,000-gallon electric pumps to be installed in Hamilton; estimated cost, \$30,000.

London, Ont., Can.—The ratepayers will vote on a by-law to provide \$393,000 for water works, \$235,000 to be used for the distributing plant for Niagara power and \$19,000 for new fire halls.—Miss A. Grant, City Clerk.

Montreal, Quebec.—The purchase of a 12,000,000-gallon steam pump for the Point St. Charles plant, by Superintendent Jamis and Consulting Engineers Walter H. Laurie, Thomas Hall and Percival St. George, has been recommended.

LIGHTING AND ELECTRICITY

Birmingham, Ala.—A special meeting of the stockholders of the Birmingham Railway, Light and Power Company will be held for rearranging the terms and making other changes in the recent blanket \$25,000,000 bond issue which are expected to render the bonds easier to float.

Dadeville, Ala.—Bids will be received, January 7, for the purchase of \$30,000 5 per cent. 30-year electric light improvement bonds.—J. B. Rylance, Mayor.

Needles, Cal.—C. F. Schader has been granted franchise for gas plant in this city.

Pasadena, Cal.—City will probably vote on two propositions regarding electric plant. One of these provides for expenditure of \$50,000 in finishing up system outlined for street purposes, and the other provides that \$150,000 be expended in equipping the plant for commercial lighting.

Vallejo, Cal.—E. D. N. Lehe, of Dixon, owner of the electric lighting plants at Dixon, Wheatland, Rio Vista, Cordelia and towns in the Sacramento Valley, is planning to erect a transmission line throughout the Suisun Valley to supply the farmers with electricity.

Loveland, Colo.—Local Chamber of Commerce is considering building a municipal lighting plant.

Jacksonville, Fla.—A. A. Kind Electric Company has been incorporated with \$20,000 capital stock; contemplates extending its

system next summer, which will include installation of ice plant, water works and gas plant. J. F. Thompson, President; A. A. Kind, General Manager.

Quincy, Fla.—The city proposes to expend about \$10,000 in the near future to improve the municipal electric plant; a new boiler of 150 horsepower, one 75-k.w. alternating-current, 2,300-volt generator and engine will probably be installed.—J. B. Price, Superintendent.

Tampa, Fla.—J. A. Trawick, Superintendent, will make improvements to electric light system, including installation of new dynamos and other equipment in power plant and laying of new trackage; a 550-horsepower boiler has been installed.

Americus, Ga.—The construction of buildings for the power plant of the Americus Railway and Power Company will be begun in January.—J. H. Hagerty, Superintendent.

Barnesville, Ga.—An election will be held, December 31, to decide the question of issuing bonds for improving electric light plant.

Blue Ridge, Ga.—Bonds, \$30,000, have been voted for electric light plant.

Madison, Ga.—Bids will be received, December 31, for the purchase of \$50,000 light and water bonds.—E. W. Butler, Mayor.

Walkersville, Ga.—A company is being organized to establish an electric light plant.—Dr. J. D. Nicodemus.

Colchester, Ill.—Council and the electric light company are still deadlocked over the question of the price for lighting the streets and the city remains in darkness.

Fisher, Ill.—Council has arranged to purchase electric plant for \$6,200.

Green Castle, Ind.—Paul H. White is an applicant before Council for a franchise empowering his company to bring a high tension wire through the city and to furnish electricity for light and power; the company with which Mr. White is connected is a new one that contemplates the construction of a large power plant in Vigo county for the generation of electricity to be transmitted by wire to Indianapolis.

Roanoke, Ind.—The Town Council has granted a franchise to the Wabash Valley people for the purpose of lighting the streets and making private lighting contracts in the town.

Jefferson, Ia.—The Jefferson Light, Heat, Power and Water Company contemplates installation of one 150kw. 3-phase alternator, 100 to 200-kw. 3-phase set, 100 to 200-h.p. boilers, and possibly a heating plant.—Percy Gray, Manager.

Kansas City, Kan.—H. F. Wulf, Henry McWren, and others have petitioned for franchise to establish another lighting system.

Topeka, Kan.—A \$50,000 bond issue will be made for improving city electric light plant.

Morehead, Ky.—City is to erect electric light plant to cost \$10,000. Reliance Engineering Company, Cincinnati, O., has plans under way.

Hopkinsville, Ky.—Terry Coal and Coke Company will add large electric or compressed-air mining plant to present plant now in operation; cost, \$25,000.

Lecompte, La.—City has adopted plans by C. Scott Yeager, Alexandria, La., for installation of electric light plant to cost about \$10,000. Baldwin Wood, New Orleans, La., has been selected as electrical engineer to supervise construction work.—J. R. Moore, Mayor.

Charlotte, Mich.—Michigan Power Company has asked City Council for street lighting franchise.

Kalamazoo, Mich.—A company which it is expected will be of vast benefit to the city of Kalamazoo and which has for its object the supplying of heat and power for business establishments of the city, has been formed by C. O. Smedwin, H. H. Freeland and Frank W. Armstrong, all of this city; the new company, which will be known as the Kalamazoo Power Company, filed articles of association with the Secretary of State; the capitalization is \$50,000, of which half is subscribed; the company will build an immense power house at Kalamazoo.

Faribault, Minn.—The Scott mill and water power, located several miles north of this city on the Cannon river, purchased in connection with the Polar Star electric light and power plant in this city, by the Northern Heat and Electric Company, of St. Paul, will be greatly improved during the coming season.

St. Louis, Mo.—Baden Power Company has been incorporated, to manufacture, distribute and deal in electric, steam and hydraulic power, by James A. Seddon, Warren D. Harris, and others.

St. Louis, Mo.—Residents of Overland Park, a suburb of this city in St. Louis county, have formed a stock company for the purpose of installing an electric plant.

Pender, Neb.—City is figuring on installing an electric light plant.

Atlantic City, N. J.—Plans for the burial

of every overhead electric lighting wire in the city were submitted to City Council by the Electric Light and Power Company, which holds a monopoly in the city; the changes will cost about \$400,000; Council approved the plan and virtually assured the company a renewal of a ten-year contract under which it receives \$50,000 annually for municipal lighting.

Canal Dover, O.—A bond issue has been voted to erect a municipal electric light and power plant.

Toledo, O.—The Citizens' Lighting and Heating Company has provided for an issue of \$100,000 in bonds for improvements.—C. S. Ashley, President.

Zanesville, O.—Surveys are being made by the Central Valley Electric Railway, Light and Power Company; H. A. Williams and C. E. Zimmerman are interested.

Anadarko, Okla.—The City Council contemplates issuing \$75,000 of bonds, the proceeds to be used to improve and enlarge the municipal electric light plant.—John Brewster, Superintendent.

Wasco, Ore.—George E. Jacobs, Portland, Ore., has purchased water power right in Deschutes river and proposes to furnish towns of Moro, Wasco and Grass Valley in Sherman county with electricity for power and lighting purposes.

Erie, Pa.—The contract for lighting the city with electricity for the five years, beginning April 1 next, was awarded to the Erie County Electric Company by Councils.

McDonald, Pa.—The McDonald Electric Heat and Power Company has been organized at McDonald with a capital of \$100,000, by A. Valentour, W. H. Young, and others.

Reading, Pa.—Board of Education proposes to install electric light plant to light the Boys' High School, at a cost of \$5,000.

McKinney, Tex.—The city has voted \$8,000 bonds for extension of electric light system.—J. L. Doggett, Mayor.

Salt Lake City, Utah.—The Utah Gas and Coke Company is making strenuous efforts to induce Council at least to light two streets with Welsbach incandescent gas boulevard lamps.

Fredericksburg, Va.—The Fredericksburg Power Company, which is to construct dams above the city on the Rappahannock, has asked franchise of Council to furnish incandescent electric power to the city.—William C. Whitner, President; Alvin T. Embrey, Secretary and Treasurer.

Puyallup, Wash.—Fuller & Manley, Tacoma, Wash., are preparing estimates for municipal lighting for this place.

Tacoma, Wash.—Donald Fletcher has applied to the County Commissioner for a franchise to construct pole lines on all the roads and highways in Pierce county; the application states that Mr. Fletcher is the owner of water rights on Cle Elum river and Cle Elum lake, in Kittitas county; it is desired to develop water power for the generation of electric current for commercial purposes.

Waterloo, Wis.—Jackson & Jackson, Engineers, Madison, Wis., are preparing for an extension to the electric light plant, to cost \$10,000.—F. H. Rood is Manager.

Brantford, Ont., Can.—A by-law will be submitted to the electors next month which will provide for the expenditure of \$55,000 for a distribution plant for power purposes only.—T. H. Jones, City Engineer.

Ottawa, Ont., Can.—The City Engineer has been instructed to confer with C. H. Keefer, C.E., of this city, to prepare plans for developing 30,000 horsepower by the construction of a dam and power house on the Ottawa river. As soon as his report is obtained a by-law will be submitted to the ratepayers.

Wingham, Ont., Can.—The Town Council will authorize the expenditure of about \$25,000 in repairs to the hydro-electric power plant here.—W. J. Wyles, Manager.

FIRE EQUIPMENT

Edwardsville, Ill.—Council is preparing to purchase additional hose.

Joliet, Ill.—Council is investigating the most desirable system of fire alarm to establish.

New Berlin, Ill.—Council is arranging to purchase fire apparatus.

Silvis, Ill.—Arrangements are being made to establish a fire company.

Evansville, Ind.—The Board of Public Works is preparing to build an additional hose house.

Indianapolis, Ind.—Council is arranging to build a new engine house in the wholesale district.

Biwabik, Minn.—Council is preparing to establish a fire alarm system.

La Crescent, Minn.—A fire company has been organized.—J. W. Weloch, Foreman.

Joplin, Mo.—Arrangements are being made to issue \$25,000 bonds for fire protection.

Phelps, N. Y.—The Village Board is arranging to build new fire houses.

Schenectady, N. Y.—It is expected that the police and fire alarm wires will soon be placed on ornamental iron poles that are to be erected in State street by the Schenectady Railway Company; at a recent meeting of the Chamber of Commerce the matter of overhead wires was taken up and President Peck said that the company would give the city the privilege of using the poles if it was desired; this would cause the removal of all the unsightly wooden poles from the street.

Akron, O.—The Fire Chief recommends the purchase of three additional hose wagons and one new truck; estimated cost, \$10,000.

Guthrie, Okla.—Council is arranging to establish a fire alarm system.

Beaver, Pa.—Council is arranging to establish improved fire protection for the factory district.

Bellevue, Pa.—Council has called election to vote on \$100,000 bonds for better fire service, streets, water, sewers, etc.

Columbia, S. C.—The Fire Department has asked an appropriation of \$38,000 for next year, to include funds for repairing engine house, the removing of one of the houses to a more desirable location and for other purposes.

Alexandria, Va.—The Board of Fire Wardens have requested Council to appropriate \$3,500 for a modern fire alarm system.

Milwaukee, Wis.—Bids will be received, December 28, for furnishing the city with two fire engine boilers, according to plans and specifications.—Peter J. Koehler, Deputy Comptroller.

PUBLIC BUILDINGS

Birmingham, Ala.—The Jefferson County Teachers' Association contemplates the erection of a high school in Jefferson county, to cost approximately \$50,000.

Tusculum, Ala.—The Colbert County Board will offer for sale \$16,000 6 per cent. Court House bonds.—Address County Auditor.

Fort Smith, Ark.—Bids will be opened, January 11, 1908, for the erection of a school to cost about \$65,000, in accordance with plans prepared by Architect A. Klingensmith.

Sacramento, Cal.—A special election will be held, December 30, to decide the question of issuing \$32,000 bonds for building school house in the Oak Park District.—Address Clerk of the Board of Education.

Denver, Col.—Plans for the new Federal building, to be erected in this city at a cost of about \$2,500,000, have been completed by the Supervising Architect, James Knox Taylor, at Washington; \$2,500,000 is reported to have been appropriated for this building.

Fort Collins, Col.—The State Board of Agriculture has authorized the building committee to proceed with the erection of the building for civil and irrigation engineering.

Pueblo, Col.—The School Board of District No. 1 is about to ask for a high school to cost about \$150,000, to be erected between Seventeenth and Eighteenth and West and Elizabeth streets.—H. Pollard, President of the School Board.

Bristol, Conn.—Plans are on foot looking towards the erection of a \$100,000 public building in this city.

Stamford, Conn.—Boring & Tilton, 32 Broadway, New York, N. Y., are preparing plans for the West Side School, and bids will soon be received.

Washington, D. C.—Andrew Carnegie has given \$50,000 to Howard University to erect a library.

Pensacola, Fla.—The Board of County Commissioners has decided to call an election to vote on the issuing of \$75,000 bonds to erect a jail.

Athens, Ga.—An election will be held, January 15, to vote on the question of issuing \$100,000 school bonds.—Address Clerk of the Board.

Brunswick, Ga.—Plans and specifications are wanted for a school building, to cost about \$40,000.—W. H. Bullard, Secretary, Board of Education.

Thomaston, Ga.—Bids will be received, January 7, for the purchase of \$50,000 20-year 6 per cent. school bonds.—Claude Worrell, Clerk.

Brazil, Ind.—Plans are on foot looking towards the erection of a new Court House; petitions will be filed asking for an appropriation of \$200,000 for the building.

Terre Haute, Ind.—Plans are being prepared for the erection of a tuberculosis hospital, at a cost of \$50,000.—John F. Scott, Commissioner of Franklin County.

Fort Madison, Ia.—H. F. Liebbe, State Architect, Des Moines, Ia., is preparing plans for a one and two-story State prison building, 57x343 feet; stone, architectural iron, gravel roof and electric fixtures; cost, \$100,000.

Rienbeck, Ia.—The citizens will vote on the question of issuing \$21,000 bonds for

erecting school house.—Address Clerk of the Board.

Salina, Kan.—The matter of issuing \$25,000 bonds for City Hall is under consideration.—Address City Clerk.

Bardstown, Ky.—R. C. Cherry, Secretary, Board of Trustees, graded common school district, reports that bids will be called for in January for a school to cost about \$200,000.

New Orleans, La.—Plans are being prepared by Architects Hewitt, Stevens & Paist for the erection of a new Federal building, to cost \$1,000,000.

Boston, Mass.—The Parade Ground of Fort Independence on Castle Island will be the site for the proposed \$250,000 immigration station recommended by Commissioner-General Sargent in his annual report; Congress has been asked to appropriate \$250,000 for this purpose.

Haverhill, Mass.—Bids are invited by the High School Commission for the construction of the new high school, the excavating for the cellar being about completed; it is intended to start work this winter, if possible.—Roswell L. Wood, Mayor.

Battle Creek, Mich.—The erection of a high school, to cost about \$250,000, is contemplated.

Iona, Mich.—Plans are being prepared for the erection of a public building to cost \$75,000.—Address Congressman Diekman.

Laurium, Mich.—Steps are being taken to install water meters in the various school buildings.

Menominee, Mich.—The County Board is considering the erection of a Court House.

Duluth, Minn.—D. H. Burnham & Co., architects, of Chicago, Ill., are preparing plans for the proposed Court House for Duluth.

D. E. Burnham & Co., of Chicago, Ill., it is stated, are preparing plans for remodeling and erecting additions to the Board of Trade Building; probable cost, \$100,000.

Fergus Falls, Minn.—The State Board of Control of St. Paul is considering the location of two buildings at the State Insane Hospital Grounds at Fergus Falls; one building is to be a detention hospital, to cost \$65,000, and the other a contagious ward, to cost \$10,000; it is also proposed to erect an addition to the hospital kitchen and employees' dining-room, which will cost \$25,000.

Stillwater, Minn.—Plans are being prepared for the erection of the State's prison building; plans have been prepared by Architect C. H. Johnson, Manhattan Building, St. Paul; cost, \$200,000.

Boonville, Mo.—Plans are being considered for the erection of a Federal Building, at a cost of \$60,000.—Address Congressman Shackelford.

Webster Grove, Mo.—Bids will be received, January 2, for the purchase of \$60,000, 20-year 4½ per cent. school bonds; the bonds will be optional after ten years.—R. S. Healey, President of the Board.

Sidney, Neb.—Bids will be received, January 1, for the purchase of \$15,000 5 per cent. school bonds.—Address Clerk of the Board.

Steptoe, Nev.—The citizens have voted \$7,000 bonds for building school house.—Address City Clerk.

Elizabeth, N. J.—The Board of Education, Elizabeth, N. J., will have plans prepared for a school building; estimated cost, \$100,000; an architect will be selected in January.

Montclair, N. J.—Plans and detailed specifications are in course of preparation in the office of Architects Hale & Rogers, 11 East Twenty-fourth street, New York, for a new public school building to be erected at Montclair for the Board of Education; the school will be located on Cedar avenue and plans will provide for a brick and stone building, thoroughly modern in construction and equipment; approximate cost, \$50,000.

Buffalo, N. Y.—Howard L. Beck, City Architect, will prepare plans for the new City Hall which is to cost \$1,000,000.—Henry V. Bisgood, Chairman of Building Committee.

Far Rockaway, L. I., N. Y.—Prof. J. D. Sulsona, Director of the American Collegiate Institute, intends erecting on Mott avenue a three-story brick, stone and steel school, lighted by gas and electricity and heated by steam; estimated cost, \$75,000.

New York, N. Y.—Mayor McClellan has asked the following architects to submit plans for the \$6,000,000 municipal building: J. Stuart Barney, Carrere & Hastings, Clinton N. Russell, J. H. Friedlander, Cass Gilbert, Heins & La Farge, Helme & Huberty, Hopin & Keon, Howells & Stokes, H. R. Marshall, McKim, Mead & White, Trowbridge & Livingston, and Warren & Wetmore.

Rochester, N. Y.—J. Foster Warner, architect, Granite Building, has plans for No. 26 public school for the city; brick will be used in construction; cost, \$250,000.

Cleveland, O.—Edward L. Tilton, 32 Broadway, New York, is completing plans for a public library building, to cost about \$50,000.

Springfield, O.—N. H. Holmes, Clerk of the Board of Education, reports that the citizens have voted to issue \$200,000 bonds for the erection of a school.

Portland, Ore.—The Building Committee of the Council recommends the erection of a four-story building for a jail and municipal court.

Abington, Pa.—Abington Township's Board of School Directors will erect a new school building on the ground facing on Susquehanna avenue, near the Old York road; estimated cost, \$100,000.

Philadelphia, Pa.—Lynch Bros. will start work at once on another of the fireproof school buildings to be built by the Board of Education, to be located at the southwest corner of Wilkey street and Montgomery avenue, and will cost \$125,000; the plans, by Architect J. Horace Cook, provide for a two-story stone building, with structural steel, concrete and terra-cotta; it will be 83x152.2 feet, with accommodations for sixteen rooms.

Pittsburg, Pa.—A \$175,000 public library will be erected at Homewood, suburb of Pittsburg, for which Andrew Carnegie has offered a contribution sufficient to buy the site and erect the building.

Architect George H. Schwan, Berger Building, has been retained to prepare plans for a two-story brick and concrete gymnasium and recreation building in Ormsby Park and another similar building to be erected in Washington Park. Both buildings will be built by the Pittsburg Playground Association and actual work will not be started before early next spring. The same architect will also prepare plans for a concrete swimming pool, to be built in Lawrence Park, Pittsburg, this also being an improvement planned by the Pittsburg Playground Association.

Newport, R. I.—The citizens have authorized the appropriation of \$50,000 to erect a school for the children of the lower grades.

Beaumont, Tex.—The Attorney General has authorized an issue of \$23,000 bonds for building school house in the South Park district.—Address Clerk of the Board.

El Paso, Tex.—The County Commissioners are preparing to issue \$25,000 bonds for the construction of Court House.—Address County Auditor.

Hallettsville, Tex.—The Attorney has approved an issue of \$18,000 bonds for the erection of school house.—Address Clerk of the Board.

Horton, Tex.—The Attorney General has approved an issue of \$10,000 school bonds.—Address Clerk of the Board.

Lynchburg, Va.—Plans have been prepared for the erection of a Federal Building, opposite the Post Office; cost, \$250,000.

Seattle, Wash.—Councilman Thomas P. Revelle has introduced an ordinance in Council specifying and adopting a plan for acquiring lands, buildings and appurtenances for a public market and a recreation pier. The ordinance submits the question of issuing \$500,000 in bonds for this purpose to the electors at the municipal election on March 3, the expenditure for property not to exceed \$160,000 of this amount.

The School Board is preparing to offer for sale \$100,000 school bonds; these bonds are a portion of the \$500,000 authorized for school purposes.—Address Clerk of the Board.

Tacoma, Wash.—Russell & Babcock, architects, have prepared plans for the proposed armory building, to cost \$95,000; it will be 120x300, of clinker brick with stone trimmings.

Superior, Wis.—Mayor Sinley has recommended that the purchase of the property now used as a City Hall be completed; improvements will probably be made.

STREET RAILWAYS

Monterey, Cal.—Engineer Fisher, of San Jose, with a corps of surveyors, is at present at work running surveys for an electric railway to connect Carmel-by-the-Sea and Monterey; the railway will be built by the Carmel Development Company, of which J. F. Devendorf, formerly of San Jose, and Frank Powers, of San Francisco, will be the main owners.

San Francisco, Cal.—Supervisor Matt I. Sullivan has had preliminary plans drawn for an underground and elevated street railway system; the Board of Supervisors will be asked to call an election to vote on issuing \$4,500,000 bonds for preliminary work.

Colorado Springs, Col.—Work will be begun at once in Manitou on the construction of the Manitou and Crystal Park Railway Company; the cost of the line will be about \$500,000.

Pueblo, Col.—The Pueblo and Arkansas Electric Railroad Company has been incorporated to build an electric line from Pueblo to Fowler, down the Arkansas Valley; the

line will pass through Avondale and Vine-land; capital stock, \$300,000; the incorporators are: M. J. Varner, Lester Wolf, and others.

Atlanta, Ga.—The directors of the Chattahoochee Valley Railway have decided to extend line from the present terminus at West Point in a northerly direction through Troup county to a point near Standing Point in Chambers county, Ala., thence through Chambers and Randolph counties in Alabama to or near Glenn, Heard county, Ga., and to or near Texas, Heard county.

Centralia, Ill.—The Centralia Railway Company has been formed, subsidiary to the Centralia and Central City Traction Company, for the purpose of building a four-mile extension from the present terminus of the line to Sandoval, Ill., serving the mining region between these points; it is expected that construction work will begin about April 1.—E. R. List, President; J. C. Burton, General Manager.

Vincennes, Ind.—Ex-Governor Winfield T. Durbin and James Murdoch, President of the Evansville & Southern Indiana, of Lafayette, have announced their intention of building an electric line to Vincennes from Evansville in the spring.

Keokuk, Ia.—The Keokuk & Columbus Junction Transit Company has been incorporated with a capital stock of \$10,000.—J. E. Peterson, President; Theodore A. Craig, Secretary.

Frederick, Md.—Theodore J. King, Consulting Engineer and Superintendent of Transportation of the Great Falls and Old Dominion Railway, has made arrangements for the preliminary survey for the proposed connecting line between that railway and the Washington, Frederick & Gettysburg railway, now being built northward from Frederick; the survey for the line from Frederick to Great Falls, where it will connect with the Great Falls & Old Dominion railway, will be run through Buckeystown and Park Mills, thence on the west side of Sugar Loaf mountain to Deckerson station, thence to the east of Beallsville, through Poolesville to Seneca, and thence to Great Falls, a distance of thirty-one miles; at Great Falls it will be necessary to bridge the Potomac river to reach the present terminus of the Great Falls & Old Dominion railway, which runs along the Virginia side of the river to Roslyn, where it crosses to Washington. The company also has an agreement with the Western Maryland railroad for the exchange of passengers and freight at Thurmont.

Batavia, N. Y.—The Board of Village Trustees at a special meeting granted an extension of the franchise of the Batavia, Medina & Ontario Electric Railway, which is known as the Crosscut Railway, for another year.

York, Pa.—The electric railway interests of York county will be merged in the York Electric Railway Company, with a capital of \$4,000,000; lines will be operated between Harrisburg and Baltimore via York.

Ballston, Va.—Maj. Charles Hines, Receiver of the Washington, Arlington and Falls Church electric railway, was in Herndon recently in connection with the projected extension of the road from Vienna to Herndon; right-of-way has also been secured almost to the center of the town.

Fredericksburg, Va.—The Fredericksburg Power Company has applied for a charter through the Corporation Commission of the State to run an electric railway from Ashland, Va., to this city, and to operate a street railway in this city; the road will be known as the Fredericksburg & Southern railway. The officers are: William C. Whitner, President; E. J. Smith, Vice President; Alvin T. Embrey, Secretary and Treasurer. Directors: J. T. Lowery, E. J. Smith, A. W. Embrey, William C. Whitner, A. T. Embrey and C. W. Jones. Should the charter be granted the company will begin operations at once in building the proposed dams above this city in the Rappahannock, which will give water power to generate the electric power. The company has also a petition which it will present Council at an early date, asking for a franchise to furnish incandescent electric power to the city.

BRIDGES

Pocahontas, Ark.—The St. Louis & San Francisco Railway will build a bridge across the Black river.

Blackshear, Ga.—Bridge over Satilla river will probably be built at cost of about \$6,000 by Commissioners of Pierce and Ware counties.—Address Chairman of Board of County Commissioners of Pierce County.

Elberton, Ga.—Commissioners of Elbert County will probably place iron piers under the Maddox ferry bridge which has just been completed; this bridge has a span of 205 feet without a support.

Joliet, Ill.—Details for the bridge plans across Cass street as a part of the track

elevation work in Joliet are now being considered by the Engineering corps of the Alton and Santa Fe roads; the Cass street bridge will be practically a duplicate of the one at Jefferson street, so that when the first plans are finished there will be but little difficulty in determining the details of the Jefferson street bridge.

Evansville, Ind.—Following Capt. C. C. Genung's report that the building of the abutments for an enlargement of the L. & N. bridge across Pigeon creek at Water street will not injure the County's wagon bridge lying just outside the railroad bridge, the County Commissioners placed their stamp of approval on the railroad's plans; the L. & N. will enlarge the bridge so that it will contain four tracks; the abutments will be extended in a southwardly direction almost reaching the wagon bridge; the cost of the railroad's bridge improvement will be \$40,000.

Ocean City, Md.—The Baltimore, Chesapeake & Atlantic will build a new draw, costing \$10,000, at the Ocean City bridge.

Mohawk, Mich.—Preparations are being made for the construction of the bridge of the Keweenaw Central over the Mineral Range tracks near Mohawk; with the completion of this work it will only be a matter of a short time before the rails are laid to Allouez and thence to Calumet; the bridge will be about 200 feet long and 20 feet high; the chief work now is being centered on the gradings between Kearsarge and Calumet.—W. D. Maiz, Secretary, General Office, Marquette Building, Chicago, Ill.

Brookhaven, Miss.—The Viola trestle on the Brookhaven & Pearl River railroad between Monticello and Brookhaven burned; it will be rebuilt.—J. F. Scott, General Manager.

Cassville, Mo.—A petition has been filed in the County Court by a number of land owners along the Cassville road to have a reinforced-concrete bridge across the Sac river at the Cassville ford; it is probable the members of the court will visit the site for the bridge before making appropriation.

Joplin, Mo.—The question of issuing \$50,000 viaduct bonds will be submitted to a vote of the people.

Kansas City, Mo.—The city will build reinforced-concrete bridge over Gooseneck creek, to cost about \$12,000.—E. A. Harper, City Engineer.

St. Louis, Mo.—The House of Delegates has passed a bill authorizing the issue of \$1,000,000 of the \$3,000,000 bridge bonds and \$500,000 insane asylum bonds.—Address City Comptroller.

Princeton, N. J.—Andrew Carnegie has given an additional \$20,000 for the construction of wings at the approaches of stone bridges over Princeton Lake.

Cohoes, N. Y.—Bids will be received, December 28, for the purchase of \$30,000 4 per cent. paying bonds and \$18,000 4 per cent. bridge bonds. Richard Bolton, City Chamberlain.

Washington, N. C.—Bids will be received, January 6, for the purchase of \$50,000 30-year county bridge bonds.—Gilbert Rumley, County Clerk.

Norwalk, O.—A resolution declaring it necessary for the Wheeling & Lake Erie Railroad Company to rebuild and raise to twelve inches the height of its overhead bridge on West Main street, was read for the first time and has passed Council.

Guthrie, Okla.—Mayor Barnes has been authorized to advertise for bids for a concrete bridge on Fifth street and a steel bridge on Ninth street.

Beaumont, Tex.—Plans are being prepared for the construction of a bridge over Pine Island bayou by Jefferson and Hardin counties; estimated cost, \$15,000; J. A. Harrison is interested.

Glenrose, Tex.—The Attorney General has approved of an issue of \$15,000 county bridge bonds.—Address County Auditor.

Graham, Tex.—The Attorney General has approved an issue of \$50,000 Young county bridge bonds.—Address County Auditor.

Paris, Tex.—A bridge on the Texas Midland road between Commerce and Klondike, near Horton, was burned, necessitating the transfer of passengers, baggage and express of the north and southbound trains; it will be rebuilt.

Palouse, Wash.—A solid steel bridge will be built at Bridge street; the city will repair the old bridge temporarily and the new bridge will be built next spring; Commissioner Rupley announces that the Board will advertise for bids at once; the span of the bridge will be 100 feet, with a 20-foot driveway and a 7-foot walk at the side.

Lake Mills, Wis.—The County Board has appropriated \$7,000 and the town of Milford has raised \$7,000 for constructing a new bridge over the Crawfish river, to replace the Hubbleton bridge.

MISCELLANEOUS

Berkeley, Cal.—Mayor Francis Ferrier has returned from a two-days' trip to Sacramento, where he inspected the incinerator; Ferrier declares that the \$40,000 needed by the city should be raised by a bond issue.

Waycross, Ga.—Bids will be received, January 8, for the purchase of \$50,000 city improvement bonds.—Address City Clerk.

Marquette, Mich.—The taxpayers of Norway, Dickenson county, have authorized the Council to bond the town for \$25,000 for public improvements.

Pittsburg, Pa.—Dr. J. F. Edwards, Superintendent, Health Bureau, states with regard to the disposal of ashes, rubbish, etc., that an investigation is to be made with a view to preparing a report on same; no plans, specifications or recommendations yet made.—Engineer, Rudolph Hering, of New York City.

Ashland, Va.—The Western Union Telegraph Company has made a proposition to put the wires in conduits instead of keeping them on poles, and this will be accepted.

Ogden, Utah.—City Hall Park will be improved according to plans prepared by Howard Everts, Landscape Architect, Railway Exchange Building, Chicago.—Wm. T. Stillwell, Superintendent of Parks.

Spokane, Wash.—A. L. White, President of the Park Commission, announces that a donation of fourteen acres of land on Cannon Hill has been made for park purposes by the Adams Investment Company; a fountain will be installed and the grounds made beautiful with shrubs, trees and flowers.

Toppenish, Wash.—Improved streets, a Town Hall, steps toward a municipal water system and public railroad crossings are a few of the things promised by C. W. Grant, the newly elected Mayor.

BIDS RECEIVED

Oakland, Cal.—The figures of the A. L. Young Machine Company for street sprinkling wagons were the lowest; they offered to supply a 600-gallon steel tank and wagon for \$378, wooden tank, \$360; 750-gallon steel tank, \$400, wood, \$380; 1,000-gallon steel tank, \$490, wooden tank, \$465. Other bidders were Baker & Hamilton, Oakland Carriage and Implement Company, and Henshaw & Buckley.

Washington, D. C.—A contract has been awarded by the War Department for the construction of two slack-water dams in the Black Warrior river, in Alabama, and the entire construction work being given to the Dravo Contracting Company, of Pittsburgh. The dams will cost approximately \$700,000. A departure from the usual custom in the matter of dam work in the South is to be made by the Dravo Company determining to employ white labor exclusively on its work, believing that it will be possible to accomplish better results, to work quicker and with greater efficiency.

Jacksonville, Fla.—Bids have been received for furnishing, complete, f. o. b. Jacksonville, one surface condenser with separate circulating and vacuum pumps, condenser to have sufficient cooling surface to condense 40,000 pounds of steam per hour and guaranteed to maintain a vacuum of 27 inches when steam turbine is using steam at 150 pounds pressure, and 60 degrees Fahr. superheat, with the circulating water at a temperature of 80 degrees Fahr. The first bid was from the Wheeler Condenser and Engineering Company, of Atlanta, but it was not considered as it gave the price f. o. b. at the factory in New Jersey. This company, however submitted another bid, according to the advertisement, for furnishing the condenser and pumps for \$12,238. The C. H. Wheeler Manufacturing Company, of Philadelphia, submitted a bid for \$11,495. The Alberger Condenser Company, of New York, offered to furnish the articles needed for \$9,890, or to furnish a condenser with 3/4-inch tubes instead of 1-inch tubes for \$9,540. J. G. Christopher submitted two proposals, one for \$10,792 and the other for \$10,000. All the bids were referred to the Committee on Electricity, with power to act.

Bids were also opened for building an addition and fitting up and equipping a bathroom for the police station. Only one bid was received, it being from the McCarroll Compo-Stone Company, of Jacksonville, offering to do the work for \$1,200. On motion of Trustee Dillon the bid was accepted and the contract awarded to the company.

The Sewer Committee reported that the bid of Bryan & Co., for the sewer work, was the lowest and best, and recommended that they be awarded the contract. The recommendation was adopted.

On a recommendation of the Electric Committee the bid of John G. Christopher for furnishing feed pumps for the electric light plant was accepted.

The Fire Committee reported that the bid of the Eureka Fire Hose Company for furnishing 2,000 feet of fire hose had been ac-

cepted and the hose purchased. The report was adopted.

Joliet, Ill.—Sandeford & Mitchell were the only bidders and were awarded contract for 2,685 square feet of Portland cement concrete walk on Wilcox street, including labor and material, at 14 cents; also 900 cubic yards excavation in sidewalk area between curb and property lines and in foundations.—William S. Welsh, Clerk, Board of Local Improvements.

Peoria, Ill.—The Crescent Construction Company has been awarded the contract for the extension of the sewers on Main, Hamilton and Fulton streets to the line of the new dock, at \$1,074; other bids were as follows: Gustav Moritz, \$1,265; the Schmidt Construction Company, \$1,850, and Michael F. Langton, \$1,300.

Evansville, Ind.—Bids on the Seventh avenue sewer running from Franklin street to Block 16 Lamasco, have been received by the Board of Public Works, and the Heuman-Vineyard Plumbing Company awarded the contract; the concern bid 69 cents per lineal foot, \$30 for inlets and \$23 for manholes; the Zeller-Hughes Plumbing Company, new sewer contractors, were the only other bidders.

Baltimore, Md.—The following bids were received for street lighting from the American Lighting Company: Ordinary street gas lamps, to supply and maintain fixtures and light lamps, \$10.85 a year; same for boulevard lamps, \$11.85. In both cases city pays \$7.25 a year for gas. For naphtha lamps, to supply naphtha and fixtures and to maintain and light, \$25.

Lowell, Mass.—Mayor F. W. Farnham has signed a contract with C. C. Callahan, of Canton Junction, for 2,000 feet of C. C. C. hose, knit cotton jackets, 2 1/2 inches, lined with Jersey car spring, best rubber, at 70 cents per foot; other dealers and agents refused to submit bids on the requisition, which called for this specific hose.

Reno, Nev.—W. H. Blalock was low bidder for excavating and backfilling 2,200 feet sewer trench, 5 1/2 x 2 feet, rock, clay and loam excavation, at 40 cents per lineal foot; the Reno Construction Company bid 54 cents; S. Lund, 68 cents; Roberts, \$1.10; Rogers, 40 cents.—H. B. Maxson, City Engineer.

Camden, N. J.—Two bids for increasing the city's daily water supply by about 5,000,000 gallons were received. J. S. Sweigard, Philadelphia, offered to build an auxiliary plant and furnish water independent of the city's present supply, at 4 1/2 cents per 1,000 gallons and to sell the plant to the city at their option of \$250,000. N. P. Quinn offered to build a plant to supply water at \$15 per million gallons a day, and to sell the plant in five years for \$500,000; in ten years, for \$300,000; 25 years, \$260,000; 30 years, \$230,000.

Flemington, N. J.—A contract has been awarded to the Delaware River Quarry and Construction Company for \$48,851, for a macadam road from Somerset county line to Pleasant Run.

New York, N. Y.—Bids were recently opened by Commissioner John H. O'Brien for the lighting of the city next year. No bids were received for supplying gas, but the city will have to pay 75 cents a thousand feet. In the main the bids for furnishing electricity were the same as for the present year. Arc lights will cost the city \$100 each for the first 5,000 lamps and \$95 for each additional lamp. Incandescent lights will cost \$22.50 each all over the city; current for heat and other purposes, from 7 1/2 to 10 cents a kilowatt hour, and current for power, 6 cents. There will be a slight increase in the cost of mantle lamps in Queens, owing to increased cost of labor. The city's light bill this year will be between \$3,500,000 and \$4,000,000.

Oneida, N. Y.—Theodore F. Kalbfleisch, of Glens Falls, has been awarded the contract for the construction of the Durhamville aqueduct under the Erie canal. His bid was \$56,093, while the estimate of the engineer was \$46,455, but the bid of Mr. Kalbfleisch was several thousand dollars lower than the others.

Syracuse, N. Y.—Bids were received for the paving of McCarthy alley as follows: Asphalt pavement with stone curb, Central City Paving Company, \$2,822.80; F. J. Baker, \$2,908.20. Vitrified brick or block with stone curb, C. T. Hookway, Syracuse brick or block, \$2,711.78; Central City Paving Company, Johnsonburg brick or block, \$2,822.80; Samuel Bonn, Syracuse brick or block, \$2,805.24; F. J. Baker, Johnsonburg brick or block, \$2,908.20. Vitrified brick or block, with combined curb, Samuel Bonn, Syracuse brick or block, \$2,691.58.

C. T. Hookway has been awarded a contract for constructing a 12-inch pipe sewer in Summit avenue from Stolp avenue to Crossett street, and a contract for the paving of Columbus avenue from East Genesee street to Lexington avenue was awarded to Guy B. Dickison.

Ashtabula, O.—Thomas Fitzgerald has the contract for grading, draining and paving with asphalt block the east approach of the Spring street viaduct at his bid of \$2,600; he will also begin the work of constructing sewers and drains for the pavement this winter.

Dayton, O.—The bid of Contractors Paul & Kershner for the connection of the storm-water sewer in Forest avenue with the Riverdale intercepting sewer, at 75 cents a lineal foot, was accepted by the Service Board, as well as their bid for work on the Riverdale intercepting sewer, the placing of a 6-inch drain, at 40 cents a foot.

The William McCarty Company was awarded the job for constructing the lateral storm sewers in Boltin, Milton, St. Paul and McReynolds streets, at \$87.04.

Portsmouth, O.—J. A. Kelly has the contract for the sanitary sewer to be constructed in Cherry alley.

H. Evans has the contract for raising the flood defense pumping station to a 62-foot level at his bid of \$600; bids for station boilers will be re-advertised.

Toledo, O.—The following are the low bidders on the sidewalk contracts here: East district, A. Schroeder, \$1,796; cement; stone, the Knoop Bros. Company, \$6,280; South district, Jas. H. Horen, cement, \$1,796; stone, C. Peck & Sons, \$7,430; North district, cement, Chas. Neuendorf, \$1,708; stone, C. Peck & Sons, \$6,200.

Youngstown, O.—John Grady has been awarded contract for constructing the East Federal street sewer, from Walnut street to Crab creek, for \$8,850.25; it will be constructed at once so that a new pavement can be laid in the spring.

Zanesville, O.—Bids for the construction of six sewers were opened by the Board of Public Service. Eight contractors submitted bids and the list of figures was turned over to Engineer Gregg for tabulation. The following is the list of bids: Mercer & Prince, South, \$961.20; Culbertson, \$996.20; Hamline, \$1,805.42; Monroe, \$1,401.78; Dymond, \$604.64; Primrose, \$1,283.10; John Woodrow, Hamline, \$952.50; Monroe, \$934; Dymond, \$394.87; Primrose, \$782.55; I. H. Marple, Dymond, \$326.07; Primrose, \$707.15; T. M. Lynn, South, \$958.25; Culbertson, \$993.25; Hamline, \$858.58; Monroe, \$847.94; Dymond, \$359.10; Primrose, \$649.80; Wilson & Harper, South, \$1,166.30; Culbertson, \$1,257.55; Hamline, \$1,437.80; Monroe, \$1,497.45; Dymond, \$681.06; Primrose, \$1,206.56; J. C. Williams, South, \$860.25; Culbertson, \$833.75; J. E. Brown, South, \$792.05; Culbertson, \$828.70; Hamline, \$804.40; Monroe, \$896.80; Dymond, \$320.65; Primrose, \$638.05; Adams Bros., South, \$738.75; Culbertson, \$840.25; Hamline, \$1,009; Monroe, \$934.62; Dymond, \$384.90; Primrose, \$808.70.

Enid, Okla.—Warner Quinlan has been awarded contract for 75,000 square yards 3-inch asphalt paving on 6-inch concrete 1:3:6 Portland base, at \$2.23; also 85,000 square yards asphalt, at \$2.29; earth excavation, 30 cents per cubic yard, and 380,000 lineal feet new 8-inch concrete curb and gutter, 1:2:4 Portland, at 97 cents. The Stuckey Construction Company has contract for 23,000 square yards brick on 6-inch concrete, at \$2.35, and earth excavation at 35 cents, and 4,000 lineal feet 6 and 8-inch concrete curb, at 67 cents.—C. H. Sexton, City Engineer.

Altoona, Pa.—J. S. Vipond has been awarded contract for the construction of the State road along the Logan valley line between Thirty-sixth street and Young's crossing; work will be started at once.

Holidaysburg, Pa.—W. H. Goodfellow's Sons, of Altoona, have been awarded contract for 186 tons 4-inch cast-iron pipe, at \$28.40; 7,500 lbs. lead, at \$4.65 per cwt., and 800 lbs. oakum at \$3.65 per cwt.; there were eight bids for cast-iron pipe, ranging from \$28.40 to \$34.—W. M. Brown, Secretary and Treasurer Blair County Home.

Chattanooga, Tenn.—Joseph Trimby, a local contractor, was awarded the contract for the erection of Chattanooga's new City Hall, which is to cost \$200,000; Mr. Trimby's bid was \$157,750; other bidders were the Fuller Construction Company, \$162,900; the West Construction Company, \$167,050; George Hood & Co., Somerset, Ky., \$195,000.

Galveston, Tex.—Kelso & Vantine have been awarded contract for 3,516 square yards vitrified brick on 3-inch sand base, at \$1.50, and 2,290 square yards on 4-inch concrete base, at \$2.25; excavation included in bid, total, \$10,426.50. McKinna & Groff were awarded contract for setting 2,780 lineal feet 1:3:5 concrete curb, 12-inch and 16-inch, to show 6-inch gutter face, at 43 cents; total, \$1,195.40; Kelso & Vantine bid \$1,334.40.—A. T. Dickey, City Engineer.

Tacoma, Wash.—The following bids for street improvements were awarded: F. A. Kearsal for district 332, \$61,400; Barber Asphalt Company, for district 339, \$146,000; Fred Essman for sidewalks on South Thirty-eighth street, \$2,430.

PATENT CLAIMS

872,602. Form for Concrete Sidewalks. John R. Zeiser and Adlow Zeiser, Berwick, Pa. Serial No. 384,240.

A form for use in constructing sidewalks of concrete or like material, the same comprising spaced confining strips, tie plates having slots near their ends extended transversely thereof in an upward direction from their lower edges to receive said confining strips by slipping over their upper edges, and having transverse notches in the outer vertical edges of the said slots, and keys adapted to be driven into said notches after securing the tie plate and confining strips.

872,618. Means for Ventilating Tunnels. Lawrence G. Gebhard, Buffalo, N. Y. Serial No. 308,216.

Means for ventilating tunnels and the like, comprising an air outlet conduit arranged lengthwise at the top of the tunnel and having an elongated outlet opening in its underside, baffle bars arranged at intervals across said outlet opening, and a valve or shutter arranged within the outlet conduit and adapted to cover and uncover said opening, substantially as set forth.

872,866. Mud Retainer or Collector for Water-Clarifying Tanks. Emile Vial, Brussels, Belgium; Louise Bourgoin Vial, Blanche Vial, and Gabrielle Vial, heiresses-at-law of said Emile Vial, deceased. Serial No. 306,512.

In a mud retainer and collector for water clarifying tanks, the combination, with a tank, of two spaced partitions dividing the tank transversely into two compartments, each partition extending up to approximately the level of circulation and the one having an opening near the bottom thereof, means for admitting the water to be clarified into the compartment adjacent to the partition having said opening, a perforated plate arranged between said partitions in the upper portion thereof, horizontally, and means for causing the water to flow over the partition having said opening, down through said plate and then up through said plate and over the other partition, substantially as described.

872,958. Street Lamp. Ragland Momand, New York, N. Y., assignor to Consolidated Street Lighting Company, a Corporation of Maine. Serial No. 309,220.

In a street lamp, a lamp head, posts extending upwardly therefrom, a lower flange member supported upon said posts, an upper flange member hinged to said lower flange member and carrying a globe, a globe supported upon the lamp head, a flue holder carrying an adjustable flue, a telescoping arm carrying said flue holder, and a pivotal support, upon the lower flange, for said telescoping arm, whereby the flue holder may be swung aside out of the path of the globe.

873,010. Machine for Cleaning Filter Beds. Hiram W. Blaisdell, Los Angeles, Cal. Serial No. 201,933.

A machine for cleaning filter beds comprising a support adapted to travel lengthwise the filter bed, suction means for elevating and discharging material, a series of independently operating scrapers arranged end to end entirely across the filter and adapted to scrape material from the surface of the filter bed in the direction of travel of the support and a connection between said scraper means and said elevating and discharging means.

873,081. Rock Crusher. Edwin S. Philips, Kennett Square, Pa., assignor to The American Road Machine Company, Kennett Square, Pa., a Corporation of Pennsylvania. Serial No. 321,097.

In a rock crusher, the combination with the moving jaw and a shaft from which the same is pendulous, and the fixed jaw, of the main shaft, a cam thereon, a strap on the cam having a removable section and a toggle on the removable section of the strap, said toggle having a rounded head, there being a cup-shaped recess in the moving jaw, and a wearing plate of substantially uniform thickness having its central part dished in to form on one side to said recess and on the other side to the rounded head of the toggle.

873,098. Meter. Ernest Schattner, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Serial No. 251,778.

In combination with an alternating current circuit, an electrolytic meter comprising an electrolytic valve having electrodes and electrolyte adapted to permit the flow of current impulses in one direction only, a shunt around said valve adapted to permit the flow of current impulses in the opposite direction, and means for indicating the amount of electrolytic decomposition in said valve.

INCORPORATIONS

T. R. Crane Contracting Company, Schenectady, N. Y.; building, bridge and street contractors; capital, \$30,000. Incorporators: Thomas R. Crane, William S. Veeder, Nicholas I. Veeder, Garrett S. Veeder, Abram G. Veeder, Schenectady, N. Y.

Elmore & Hamilton Contracting Company, Schenectady, N. Y.; general contractors; capital, \$150,000. Incorporators: Mike Elmore, Charles S. Offutt, Schenectady, N. Y.; James M. Hamilton and Charles F. Jordan, Albany, N. Y.

Equitable Engineering Company, New York, N. Y.; civil engineering; capital, \$10,000. Incorporators: Edward Becket and Mahlon O. Kasson, New York; C. B. Sanders, Montclair, N. J.

German Light and Power Company of Gorman, Eastland County, Tex.; capital, \$15,000. Incorporators: F. B. Winters, S. D. Bowles and W. A. Waldrop North.

Houchin-Aiken Company, Brooklyn, N. Y.; general contractors; capital, \$100,000. Incorporators: Ernest A. Houchin, Clara L. Houchin, 4704 Sixth avenue; Charles W. Aiken, Emma S. Aiken, 800 East Twelfth street, all of Brooklyn.

International Public Service Corporation, Dover, Del.; capital, \$500,000. Incorporators: Paul Henry Lagat, F. 91 Eastern Parkway, Brooklyn; Daniel Seymour and William P. Sickley, Yonkers, N. Y.

Ithaca Contracting Company, Ithaca, N. Y.; general contractors; capital, \$10,000. Incorporators: James Hillick, Willis C. Hine, William Browne, William D. Rockwell, Ithaca, N. Y.

W. A. Jackson Company, 87 East Washington street, Chicago, Ill.; electrical engineering and contracting; capital, \$5,000. Incorporators: William A. Jackson, Frank P. Keogh, William J. King.

Mount Washington Water Works Company, Baltimore, Md.; to supply water in Baltimore county; capital, \$25,000. Promoters of the new company are the Mount Washington Water Works Company and the Roland Park Company.

Municipal Improvement Company, Portland, Me.; railroads; capital, \$500,000. President, J. H. Ridge; Treasurer and Clerk, C. L. Hutchinson, both of Portland.

Mobile Portland Cement Company, Augusta, Me.; cement; capital, \$5,250,000. President, L. A. Ingalls; Treasurer, E. J. Pike; Clerk, C. L. Anderson, all of Augusta.

Peters & Peters, Inc., Newark, N. J.; general contractors; capital, \$25,000. Incorporators: Edward H. Peters, as above; George W. Peters, Jr., 320 West 83d street; Frederick H. Douglas, 111 Broadway, both of New York.

Progress Water Company, Harrisburg, Pa.; to supply water from Swatara creek; capital, \$5,000. Incorporators: B. F. Ober, John H. McIlhenny and Charles H. Smith.

Terra Alta Water Company, Charleston, W. Va.; to supply the town of Terra Alta with water; capital, \$10,000. Incorporators: W. T. White, Parley De Berry, M. F. Daily, C. F. Dodge, J. C. Mayer and J. S. Larkin, all of Terra Alta.

Whitney Pipe Cleaning Company, East Orange, N. J.; to clean and repair water mains; capital, \$100,000. Incorporators: David A. McBride, Leslie Gray, Harry H. Picking, as above.

Civil Service Examinations

Sanitary Engineer and Draftsman—The United States Civil Service Commission announces an examination, January 15-16, to fill a vacancy in the position of draftsman and dairy sanitary engineer in the Dairy Division, Department of Agriculture, at a salary of \$1,400 to \$1,600 per annum. Apply on Form 1312.


Assistant Engineer of Tests—The United States Civil Service Commission announces an examination, January 22, to fill two vacancies in the position of assistant engineer of tests in the testing laboratory at Watertown Arsenal, Mass., at \$1,200 per annum. Apply on Form 1312.

Electrical Assistant—The United States Civil Service Commission announces an examination on January 15 to fill vacancies in the position of electrical assistant in the Signal Service at Large, at \$900 per annum, with prospects of promotion to \$1,400. Apply on Form 1312.

Electrician—The United States Civil Service Commission announces an examination on January 8 to fill a vacancy in the position of lampist and electrician, at \$1,000 per annum. Apply on Form 1052.

Aid—The United States Civil Service Commission announces an examination, January 15-16, to fill four vacancies in the position of aid in the Coast and Geodetic Survey, at salaries of \$720 per annum. Apply on Form 1312.

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VOLUME XXIII
NUMBER 26

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NEW YORK, DECEMBER 25, 1907.

THIS NUMBER CONTAINS

A proposed plan for a

Civic Centre for Pittsburg

Showing improvements suggested by architects of that city.

A synopsis of a report by Dr. Jackson dealing with the relation between

Flies, Filth and Fever

What the State Boards of Health of New Jersey and Pennsylvania are doing
to remove the

Pollution of the Delaware River

Brief descriptions of municipal features of

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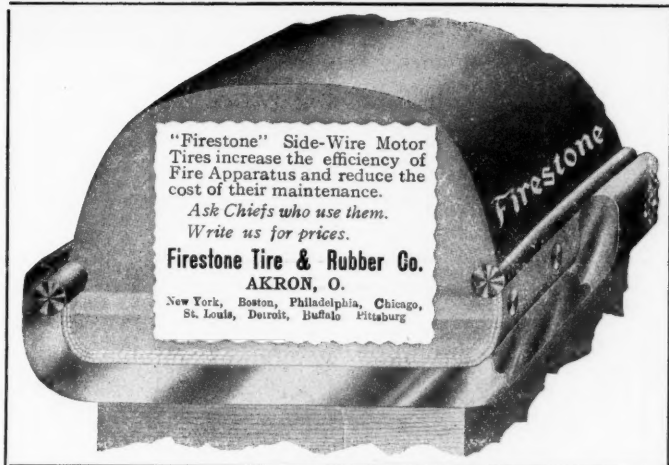
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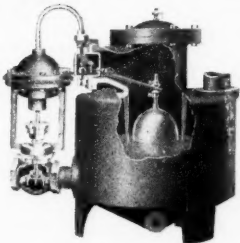
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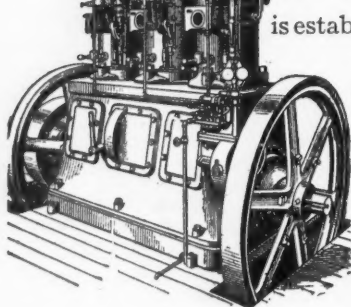
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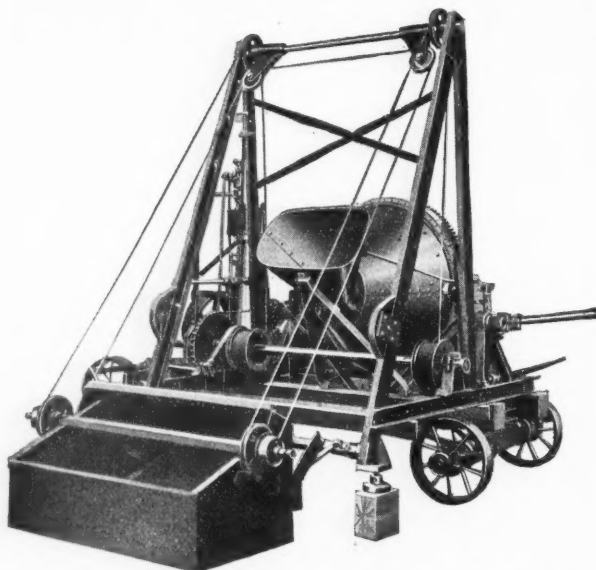
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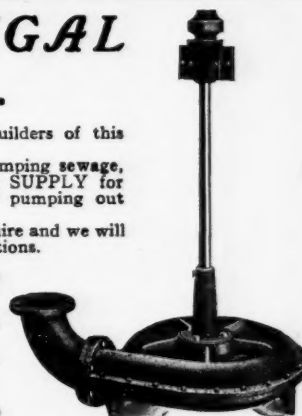
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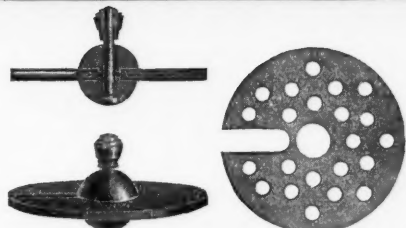
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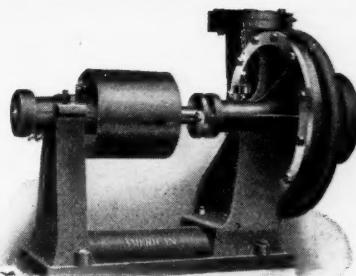
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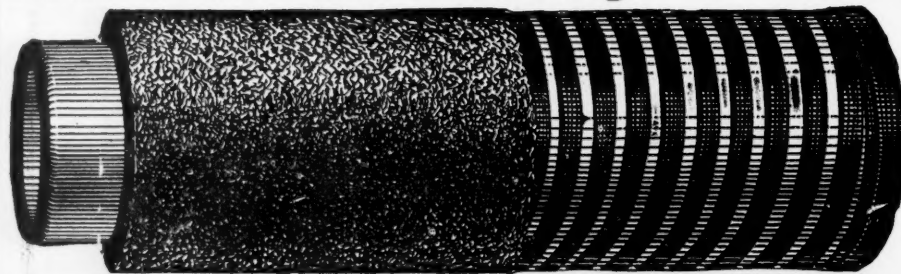


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Proposals

BASCULE BRIDGE

New Orleans, La., Nov. 21, 1907.

Pursuant to ordinance No. 4551 and 4832 N.C.S., sealed proposals will be received at the office of the Comptroller in the City of New Orleans, until the hour of 1 p. m. Thursday, January 2, 1908, for the erection of a bascule trunnion bridge over the Bayou St. John, at the intersection of Esplanade avenue, in accordance with plans and specifications on file in the office of the City Engineer. Deposit \$1,500 with the City Treasurer, and his receipt enclosed with bid, or certified check for said amount. Bond in an amount equal to twenty-five (25) per cent. of the contract price.

The City Engineer will furnish bidders with a blank form of proposal; no proposal will be considered unless submitted on such form. Bidders must have paid their city license in order that their bid may be accepted.

The city reserves the right to reject any and all bids.

CHARLES R. KENNEDY,
Comptroller.

STREET PAVING

Billings, Mont., November 7, 1907.

Sealed proposals for the paving with shale brick of certain streets of the City of Billings, Montana, described in the resolution creating Special Improvement District No. 21, will be received by the City Council up to 8 o'clock p. m. of February 4, 1908, addressed to the undersigned, and endorsed: "Proposals for Paving."

The work for which proposals are invited consists of, approximately, 6,305 square yards of shale brick pavement, the foundation for which is otherwise provided for.

Each proposal must be accompanied by a certified check for \$1,000 on some responsible bank in the City of Billings, and made payable to said city. The successful bidder must enter into an undertaking in the sum of \$2,000, with approved sureties. Plans and specifications are on file in this office.

The right is reserved to reject any and all bids.

J. D. MATHESON,
City Clerk.

LAYING WATER PIPE

Phoenix, Ariz.

Sealed proposals will be received by the Superintendent of the Water Department at the City Hall, Phoenix, Arizona, until 4 o'clock of January 10, 1908, for laying cast-iron water pipe.

A certified check for 5 per cent. of the amount of the bid, made payable to Frank Thomas, City Recorder, must accompany each proposal.

Specifications may be obtained upon application.

The Superintendent reserves the right to reject any and all bids, and to waive any informalities in any proposal.

ROBT. A. CRAIG,
Superintendent.

GARBAGE DISPOSAL

Reading, Pa.

Sealed proposals will be received at the office of the City Clerk until 7 p. m. of Tuesday, January 7, 1908, for the collection, removal and disposal of all garbage and offal in the city of Reading, for the period of one, two, three, four and five (1-2-3-4-5) years.

Each bid or proposal must be accompanied by a bond executed by a trust company existing under the laws of the State of Pennsylvania or one authorized to do business in the State of Pennsylvania, or a certified check in the sum of two thousand dollars (\$2,000.00), and the successful bidder will be required to enter into a contract bond in the sum of ten thousand dollars (\$10,000.00); said bond to be executed by a trust company existing under the laws of the State of Pennsylvania, or one authorized to do business in the State of Pennsylvania.

Specifications of the work can be seen and proposal bonds had at the office of the City Engineer.

All proposals must be endorsed "Proposals for the collection, removal and disposal of all garbage and offal," and addressed to the Department of Garbage, in care of Caleb Weidner, City Clerk, Reading, Pa.

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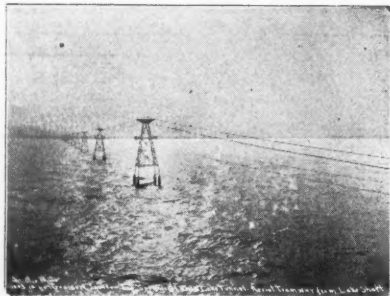
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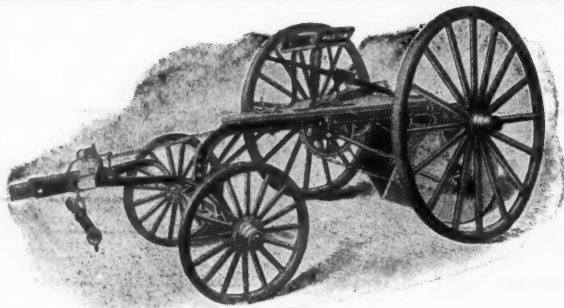
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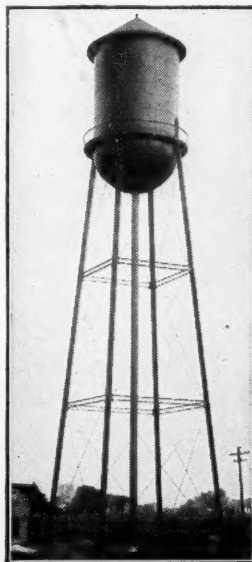


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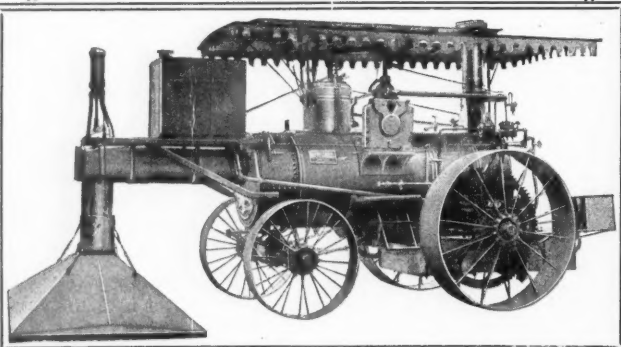
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U. S. WOOD PRESERVING COMPANY

29 Broadway, New York City

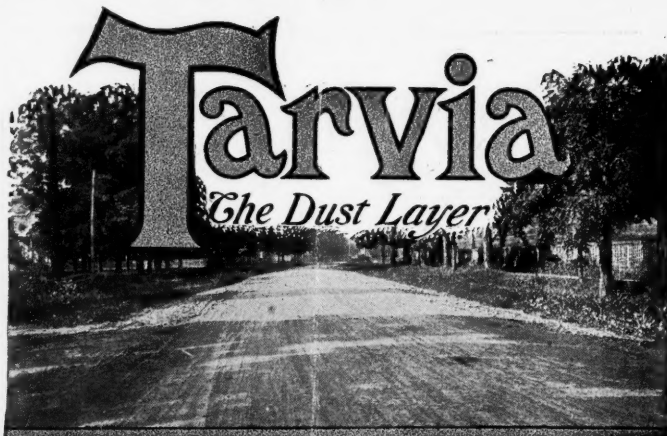
LUTZ Surface Heater



Softens asphalt or bituminous pavements with hot air, so that they can be readily removed and new material added. This new material can then be welded perfectly by heating the foundation before it is laid. It makes maintenance and re-surfacing easy and inexpensive. Drop us a line and let us confer about it.

BLAKE & LUTZ ASPHALT MIXING PLANT
Mixes any bituminous material perfectly. See next week's ad.

Equitable Asphalt Maintenance Co.
408 Long Building, Kansas City, Mo.



TARVIATED ROAD IN OYSTER BAY, N. Y.

The use of Tarvia for the permanent suppression of dust on macadam roads is based on the principle that a rightly built road should be dustless.

Tarvia acts as a binder on the top surface of the macadam, thereby creating an elastic, water-proof and frost-proof surface, which does not readily pulverize under traffic.

One treatment with Tarvia lasts about a year and the next treatment will probably last two years, less and less Tarvia being required the longer the process is maintained.

Tarvia is a genuine road improvement, reaching the basic causes of dust and wear. It has been thoroughly tested by Federal and State engineers and has received the official stamp of their approval as a means of suppressing dust.

Thirty cities made practical use of Tarvia during the last summer and several have adopted it for universal use.

Booklet on request.

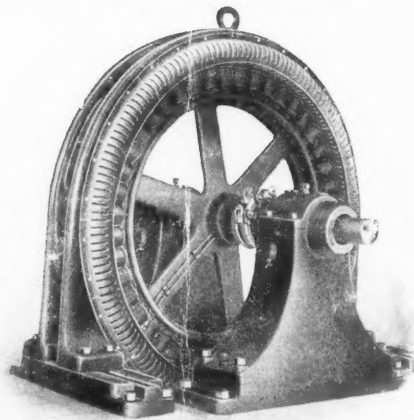
BARRETT MANUFACTURING COMPANY

New York, Chicago, Cincinnati, St. Louis,
Philadelphia, Cleveland, Kansas City,
Allegheny, Minneapolis, New Orleans, Boston



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Multiphase Alternators Direct Connected



Type TRE Three-phase Revolving Field Alternator

A neat, highly efficient alternator, slow speed, liberal design, very rigid construction. The best ventilated alternator on the market, allowing all material to be worked at a higher efficiency.

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